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Implementing Payment Reform in the Midst of the Storm

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EXECUTIVE SUMMARY

As part of its ongoing effort to study methods of providing more cost-effective care, the Health Care Financing Administration (HCFA) implemented the Per-Episode Home Health Prospective Payment Demonstration. Under the demonstration, participating home health agencies were paid a fixed, lump-sum payment for the first 120 days of each episode of care provided to Medicare beneficiaries and a predetermined rate for each visit thereafter. By allowing agencies to retain most of any surplus payments over cost, this payment method gave agencies an incentive to provide home health care in a cost-efficient manner.

BACKGROUND

Ninety-one agencies in five states entered the three-year demonstration at the start of their 1996 fiscal year. Prior to the start of the demonstration, the participating agencies were randomly assigned to either the treatment group or the control group. Agencies assigned to the treatment group were reimbursed under the demonstration's prospective payment method, whereas those assigned to the control group continued to be reimbursed under Medicare's method of cost-based reimbursement (the payment method in effect for all home health agencies at the time the demonstration began).

For each patient admitted to home health care, treatment group agencies received a lump-sum payment for the first 120 days of home health care, regardless of the number of visits provided or their cost.[1] The amount of the per-episode payment was based on each agency's own costs during the fiscal year immediately preceding its entry into the demonstration, adjusted for changes in its case mix and for inflation. An agency could receive a new per-episode payment for a given Medicare beneficiary only after the 120-day "at-risk" period had ended and a 45-day gap in services had taken place. For each visit after the at-risk period that did not begin a new episode (referred to as the "outlier" period), treatment agencies received a fixed payment that varied by the type of visit and that was based on their predemonstration costs.

HCFA reimbursed the treatment agencies for up to 99 percent of fiscal-year losses up to the (Section 223) cost-per-visit limits that applied to all agencies in the Medicare program. The agencies had to share any profits in excess of specified limits with HCFA.

RESEARCH GOALS AND DATA

This report had three goals. First, we wanted to understand whether issues that arose during implementation of the demonstration affected our interpretation of the demonstration impacts. To meet this goal, we described how the agencies implemented specific demonstration features and the environment in which they operated. Second, we wanted to understand two key results from our

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[1] Some exceptions applied. For example, durable medical equipment, nonroutine medical supplies, and Part B ambulatory home health services continued to be reimbursed at cost.

previous impact analyses—how prospectively paid agencies reduced their visits per episode so sharply with no apparent effect on care quality, and why their per-visit costs increased. To meet this goal, we described the strategies that agencies used to lower costs and utilization, as well as the factors that inhibited their ability to do so effectively. Third, we wanted to understand how the agencies changed their business models and care practices in response to the new payment system. Our purpose was to use this understanding to envision changes likely to occur under the national prospective payment system (PPS). We accomplished this goal by comparing the changes that the prospectively paid agencies and the cost-reimbursed agencies made in their business models and care processes.

The primary data source for this report came from site visits to 63 of the agencies participating in the demonstration. During the site visits, we interviewed both administrative and visiting staff to obtain their views on many issues, including how their practices changed and whether that change was caused by the new payment system or by other factors. We supplemented the interview data with information collected from various agency documents and from Palmetto Government Benefits Administrator (PGBA), the demonstration fiscal intermediary.

FINDINGS

Did Implementation Issues or the Environment Affect Our Interpretation of the Demonstration Results?

Prospective payment required three new operational features that substantially differed from the cost-reimbursed system that could have affected the demonstration results. These included: (1) medical review procedures, (2) financial procedures, and (3) the quality assurance (QA) system. If these systems failed to operate as intended, the demonstration agencies might have focused their efforts on resolving operational problems, rather than on responding to the demonstration incentives.

We found no evidence that the medical review procedure was implemented in a way that affected the demonstration results. During the early months of the demonstration, the requirement that every case be reviewed caused major procedural problems for PGBA, which was unable to process all the cases in a timely way, and major financial problems for the agencies, which had reduced cash flow because their payments were delayed by the reviews. The combination of the decision to decrease the medical review requirement to 25 percent of the cases and the introduction of bimonthly interim payments to smooth the agencies' cash flow resolved these problems.

We found some evidence that the implementation of the new financial procedures caused the prospectively paid agencies to spend resources more conservatively under the demonstration than they probably would do under a national system. About half the agencies reported that they spent resources extremely cautiously during the demonstration because they lacked information about their financial situation. The lack of financial information was the result of two problems. First, substantial time (more than two and one-half years) elapsed before the agencies received their final payment rate. Second, the agencies were never given a statistical report that would have enabled them to track payments and utilization. (This report was provided under the cost-reimbursement system, and initially, PGBA had planned to provide it as well.) This problem mostly affected

agencies that did not have the management information software that would enable them to produce their own statistical reports. Because the agencies spent resources conservatively, the increase in the per-visit costs reported by Cheh and Trenholm (1999) and by Cheh and Black (2001) may be somewhat low relative to a system with better information (as we would expect the ongoing PPS to be).

Finally, the agencies had difficulty implementing the QA system; but the majority of the difficulties were resolved during the demonstration. One problem that was never resolved was the collection of data when the patient entered the hospital--most agencies had difficulty tracking this point. However, both the prospectively paid agencies and cost-reimbursed agencies experienced these problems, so it is unlikely that they affected any comparisons between the two groups.[2]

Our analysis of the home health environment showed that dramatic changes occurred during the demonstration. Regulatory changes at the national level combined with the growth of managed care and local competition for referral sources led to sharp declines in agency volume. Because these changes affected prospectively paid and cost-reimbursed agencies equally, we have no reason to believe that they biased our estimates of the demonstration impacts. However, given that the incentives stemming from the environmental changes were quite similar to those provided by PPS, the differences between the prospectively paid and cost-reimbursed agencies probably are smaller than they would have been in absence of these environmental changes.

How Did Prospectively Paid Agencies Reduce Their Visits per Episode, and Why Did Their Cost per Visit Rise?

Previous impact analyses found that the prospectively paid agencies reduced their visits per episode substantially more than did cost-reimbursed agencies (by 17 percent) (Trenholm 2000a; and Archibald and Cheh 2000), and that they did so without any adverse impact on patients (Chen 2000). Furthermore, despite the incentive to decrease their cost per visit, the cost per visit rose more for the prospectively paid agencies (by 11 percent) (Cheh and Black 2001). What explains these results?

To reduce their visits per episode, the agencies had to be willing to adopt effective strategies, but they also had to be able to effectively implement those strategies. Particularly successful strategies included increasing supervision of visiting staff, encouraging staff to promote patient independence, improving patient education, and changing the timing of visits. These strategies seemed to be most successful when they were used together or in combination with other approaches. To actually reduce service use, however, the agencies had to overcome numerous obstacles, including staff resistance, limits on available capital and managerial resources, and the conflicting need to spend management resources on providing the QA information. Furthermore, successfully reducing the number of visits per episode entailed a financial risk: agencies that decreased their visits per episode the most experienced the largest increase in their cost per visit.

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[2]In our evaluation work using the QA data, we did not use the data points that were triggered by a hospitalization.

Although the agencies focused less on reducing costs than on reducing visits, we found that they did try to reduce their costs during the demonstration, but with little success. They tried to reduce their costs by reducing administrative staff, consolidating office space, investing in new technology, increasing productivity standards, and reducing benefits. Prospectively paid agencies were no less aggressive in their efforts than were the control agencies, but, despite their attempts, their cost per visit increased relatively more. Two factors thwarted their efforts to lower per-visit costs. First, their volume of services fell relatively more during the demonstration, increasing the overhead per-visit cost. Second, strategies that were effective at reducing visits (such as increasing supervision) sometimes increased the cost per visit, and some strategies that reduced the cost per visit (such as paying staff on a per-visit basis) made it difficult to reduce visits per episode. Thus, prospectively paid agencies, which were trying to achieve both goals, were implementing strategies that were at cross-purposes. Because they reduced their visits per episode more than did the cost-reimbursed agencies, their cost per visit increased relatively more.

Perhaps the most important lesson we learned from our analysis is that few agencies realized their strategies were working at cross-purposes. Many of the demonstration agencies lacked the financial savvy to understand that the more they reduced their visits per episode, the more their cost per visit would rise because the falling volume would increase overhead cost per visit. Furthermore, many failed to understand that the techniques they used to reduce visits increased their per-visit costs.

How Did the Prospectively Paid Agencies Change Their Business Models and Care Processes in Response to the New Payment System?

Understanding how agencies changed in response to the new payment system will help us understand how home health agencies may evolve under the national prospective payment system. If the prospectively paid agencies and the cost-reimbursed agencies changed in different ways during the past three years, we may expect to see a continuation of these changes in the future.

We found that prospective payment had small effects on the way that the agencies conducted their business. Agencies in both groups retained the missions they had had at the beginning of the demonstration, but the prospectively paid agencies adopted slightly different approaches to achieve theirs. For example, they were more likely to explicitly consider financial viability as part of their mission—probably as a reaction to the large increase in cost per visit that prevented them from earning profits. In addition, although they did not reduce their commitment to providing charity care, they began to pursue this mission within the context of maintaining financial viability.

Prospectively paid agencies were also more likely to focus their strategic plans on physicians as referral sources. Many agencies viewed physicians as the key influence on a patient's choice of agency, and the prospectively paid agencies were much more likely to design strategies that would convince physicians to recommend their agencies. In contrast, control agencies seemed willing to choose longer-term strategies, such as establishing a reputation for providing high-quality care. The prospectively paid agencies had experienced relatively sharper declines in visit volume during the demonstration, and this drop might have prompted them to pursue more direct steps to attract new patients.

Both the prospectively paid agencies and the cost-reimbursed agencies changed the way they managed their staffs, but the two groups did so in slightly different ways. Control group agencies were more likely to consolidate management responsibilities among a smaller number of staff, whereas prospectively paid agencies were more likely to increase supervision of visiting staff, and to change the focus of staff training sessions to teach better skills for operating under the new payment environment.

Finally, agencies in both groups changed the way they delivered care. All the agencies changed their intake procedures, assessment and care planning procedures, and involvement of informal caregivers in planning and providing care. They all collected more information at intake, planned to provide fewer services, and increased the involvement of the family. Furthermore, both groups of agencies started the discharge planning process earlier and tried to make more and earlier referrals to community services. However, the prospectively paid agencies attributed these change to the new payment system, whereas the control agencies attributed them to environmental factors. Thus, although the changes in the care process would have been made even in the absence of the demonstration, prospective payment was a contributing factor, and agencies operating under the national payment system are likely to continue using those procedures.

LIMITATIONS

This study is subject to two limitations. First, we are limited in the extent to which we can generalize our findings to home health agencies nationwide. As might occur with any study design based on voluntary participation, the agencies in this demonstration may reflect the group best able (or most willing) to respond to the incentives of the intervention. If this characterization of the demonstration participants is correct, then the changes we observed may be made less frequently by the general population of home health agencies.

The second limitation, related to the issue of generalizability, is that the national program of prospective payment (begun in October 2000) differs from the one implemented for the demonstration. The demonstration agencies were operating under a temporary payment system, which provided some protection against financial losses. In contrast, the national payment system is permanent and does not provide financial loss protection. Given this difference, it is likely that agencies in the demonstration made both fewer changes and less substantial changes than they will make under the national payment system.

WHAT ARE THE IMPLICATIONS FOR A NATIONAL PROSPECTIVE PAYMENT SYSTEM?

The findings from this report confirm our other findings on access to care and quality of care (Trenholm 2000; Chen 2000; and Chen 2001). We found little evidence that the agencies attempted to screen patients to select those requiring less care, and little evidence that they abandoned their charity missions—suggesting that they sought to serve all patients even while operating under the new payment system. We also found little evidence that the agencies delivered poorer-quality care during the demonstration. Quality continues to be a major part of an agency's mission, and the major changes in the process of care implemented during the demonstration—focusing early on discharge and increasing the involvement of family and community services—are likely to enhance care as to make it worse. Furthermore, the methods the agencies used to reduce services, including increasing supervision of staff, promoting patient independence, improving patient education, and changing the timing of visits, are unlikely to affect patient outcomes adversely; in fact, they may actually enhance them. As we have stated, the national payment system uses a different payment methodology than the one used during the demonstration, and that methodology could lead to results that differ from the ones we observed. Even so, the lesson derived from this demonstration is that agencies presented with the appropriate financial incentives can change the way they deliver care and can reduce the number of visits in ways will not harm their patients.

I. MEDICARE HOME HEALTH AND ANALYSIS METHODS

The National Per-Episode Home Health Prospective Payment Demonstration was designed to test the effects of a per-episode payment system for Medicare home health services. In particular, HCFA wanted to test whether a per-episode payment system could promote more efficient use of resources without having detrimental effects on Medicare beneficiaries. The three-year demonstration began in 1995 and was implemented in five states—California, Florida, Illinois, Massachusetts, and Texas. Ninety-one Medicare-certified agencies representing a diverse set of agency characteristics enrolled and were randomly assigned to receive either per-episode prospective payment or cost reimbursement.

HCFA contracted for an independent evaluation of the demonstration to determine the effects of prospective payment. Previous evaluation reports showed that the per-episode payment system led to substantial declines in the cost per episode, driven primarily by substantial decreases in the use of Medicare home health services (Cheh and Black 2001; Archibald and Cheh 2000; and Trenholm 2000a). Specifically, home health prospective payment led to a 24 percent reduction in service use within a year, largely by reducing skilled nursing and home health aide visits. However, this substantial drop in home health use did not result in significant declines in the quality of care or in increases in the use of other provider services (Chen 2000; Chen 2001; Schore 2000; and Phillips 2000.) Furthermore, despite the large cuts in services, the agencies' cost per visit rose and their revenues fell, so they earned only small profits (Cheh and Black 2001).

The first implementation report found that demonstration agencies represented a diverse set of agencies that were heavily dependent on Medicare patients; on average, Medicare provided 83 percent of an agency's revenues. Despite the incentive to reduce visits per episode under prospective

payment, both prospectively paid agencies and cost-reimbursed agencies entered the demonstration with the intension of continuing to increase the number of visits they rendered overall. About half the agencies anticipated growing by an average of 9 percent per year. Only 15 percent expected their volume of services to decline. Some agencies, particularly the smaller ones, expressed concern that the growth of managed care and increased competition for patient referrals would affect their ability to survive. Nevertheless, all the agencies sought to identify strategies to enhance their market position and to ensure survival and growth.

In the first implementation report, we noted that a number of prospectively paid agencies did not understand many important aspects of the payment system, such as how the case-mix adjustment system worked. We also noted that problems had arisen during the implementation with billing, medical review, and the quality assurance (QA) process. The problems with the medical review system had been resolved by implementing a new procedure, and we had anticipated that more experience with the billing and QA processes would resolve the remaining issues.

Finally, we found that the majority of prospectively paid agencies had either implemented strategies or had planned to implement strategies to reduce the number of visits per episode, including closer supervision of staff, implementation of care maps, and greater reliance on community services. About half the agencies in both groups had plans to reduce their per-visit costs, using such strategies as reducing administrative costs and improving staff productivity.

This report on the implementation analysis has several analytic goals. First, we want to describe how the demonstration was implemented and the environment in which it was conducted. This description will enable us to understand whether issues arising during implementation affected the interpretation of the demonstration's impacts. Second, we want to explain the impacts of prospective payment in order to understand how the agencies made such substantial reductions in home health

use with no apparent negative effects on the quality of care. Finally, we want to understand and explain how prospective payment affected the agencies. This information will help policymakers better anticipate what will happen under a national prospective payment system.

The remainder of this chapter provides an overview of the Medicare home health benefit, the Medicare-certified home health industry, and the demonstration. It also describes the methods we used to conduct this implementation analysis.

A. THE MEDICARE HOME HEALTH BENEFIT

Congress established the Medicare home health care benefit in 1965, when the original Medicare program was created. Home health benefits were included to offer beneficiaries with acute conditions a less intensive and less expensive alternative to inpatient hospital care. At different times since the inception of the Medicare program, the home health benefit has been modified, partly to increase access to care. Under the current benefit, home health services generally are covered under Part A; neither a deductible nor coinsurance applies.[1] To be eligible for home health benefits, a beneficiary must (1) have Medicare coverage; (2) be homebound; (3) be under the care of a physician; and (4) need skilled nursing, physical therapy, or speech therapy on a part-time or intermittent basis.[2]

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[1]In some rare instances, such as when an individual does not qualify as homebound or does not have Part A coverage, home health care may be covered under Medicare Part B. In that case, deductibles and copayments do apply. In addition, under the Balanced Budget Act (BBA) of 1997, the long-term use of home health services was transferred to Part B. In these cases, there are no deductibles or copayments.

[2]Skilled nursing services are covered as long as (1) a physician has ordered them, (2) they are required on a part-time or intermittent basis, (3) they require the skills of a registered nurse (or of a licensed practical nurse or licensed vocational nurse under a registered nurse's supervision), and (4) they are reasonable and are necessary to treat an illness or injury. Physical therapy and speech therapy are covered if a physician's assessment finds these services to be necessary. Beneficiaries who need only occupational therapy are entitled to benefits only if they have established a prior need
(continued...)

Coverage under the home health benefit broadened considerably after the settlement of a lawsuit against HCFA in 1989 (Duggan v. Bowan), which subsequently contributed to dramatic growth in Medicare home health expenditures. Medicare payments for home health care rose from $2.4 billion in 1989 to $16.8 billion in 1997, more than tripling home health's share of total Medicare spending (*Health Care Financing Review* 1998). Nearly all this growth has been due to an increase in the number of visits provided, rather than to increases in the cost per visit. Between 1989 and 1997, the number of home health users per 1,000 beneficiaries rose from 51 to 109, and the average number of visits per user rose from 27 to 73 (*Health Care Financing Review* 1998; and U.S. General Accounting Office 2000).[3] The increase in the number of Medicare-certified home health agencies, from 5,700 to more than 10,000, coincided with this growth (U.S. General Accounting Office 1998). Service use patterns differed strikingly across regions throughout this period. In 1997, for example, the average number of visits per user ranged from 37 visits in Maryland to 161 visits in Louisiana (U.S. General Accounting Office 2000).

The dramatic growth in Medicare home health expenditures, combined with marked regional variations in service use and recent investigations into industry fraud and abuse (under Operation Restore Trust [ORT]), prompted Congress to legislate changes to the Medicare home health benefit as part of the BBA. These changes, which were designed to reduce home health utilization, were effective.

Utilization of home health services decreased dramatically nationwide, partly as a result of the BBA. As Figure I.1 shows, the number of visits per beneficiary fell 43 percent from 1997 to 1999.

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[2](...continued)
for skilled nursing care, speech therapy, or physical therapy in the current or previous certification period (see Teplitsky and Janson 1985-1992, p. VII.23, Section 204.4).

[3]These figures refer only to Medicare beneficiaries in fee-for-service.

Thus, as we discuss in additional detail in Chapter III, the demonstration took place during a time of an unprecedented decrease in the use of Medicare home health services.

The BBA also mandated the implementation of a prospective payment system for home health services. This new payment system was implemented in October 2000.

B. BRIEF OVERVIEW OF THE DEMONSTRATION

The National Home Health Prospective Payment Demonstration enrolled 91 Medicare-certified home health agencies in five states—California, Florida, Illinois, Massachusetts, and Texas. Of these, 47 were randomly assigned to the treatment group and received per-episode payment. The remaining 44 were assigned to the control group and continued to operate under cost reimbursement. One control agency subsequently transferred into the treatment group near the start of the demonstration, leading to a revised total of 48 treatment agencies and 43 control agencies.[4] Three demonstration agencies dropped out before entering the demonstration or soon thereafter, reducing the number of participants to 88.

The first entrants to the demonstration began implementing prospective payment in June 1995; the last entrants began in January 1996. Demonstration operations originally had been planned to continue through December 1998. Six agencies dropped out during the final year. The

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[4]The switch was made at the request of an agency that had established a network with two other agencies assigned to the treatment group. Now that the demonstration has ended, the three agencies plan to merge fully.

FIGURE I.1

RECENT TRENDS IN HOME HEALTH USE
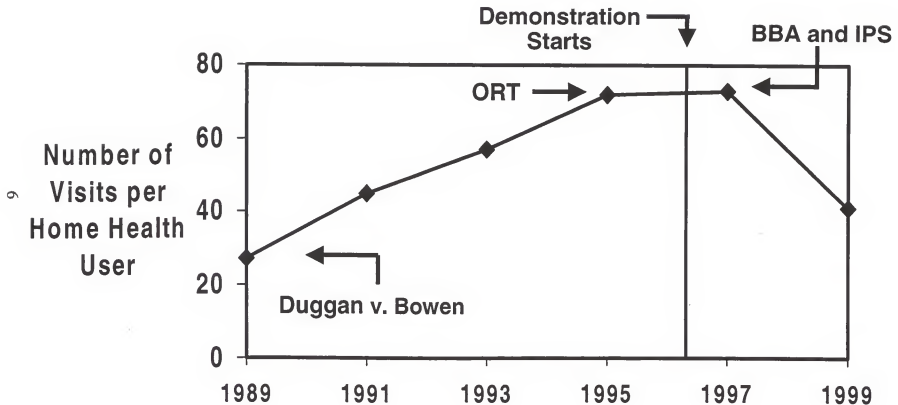
demonstration was extended for treatment group agencies until prospective payment Medicare home health care was implemented nationally in October 2000.

Demonstration agencies selected for the prospective payment group received a fixed, lump-sum payment for the first 120 days of a Medicare home health episode. To receive the payment, the treatment agencies were required to provide all home health care needed during the 120-day period. For each visit beyond 120 days (an outlier visit), the agencies received a fixed payment that also was set in advance, and that varied by the type of visit. Agencies that were able to provide care for less than the fixed rates generated profits; those whose costs exceeded the fixed rates incurred losses.

Each treatment agency's per-episode rates were based on its costs for the first 120 days of care during its fiscal year preceding entry into the demonstration (the base year). These rates were adjusted for inflation and changes in the agency's case mix in each demonstration year (relative to the base year). Payment for outlier visits was also based on the agency's base-year per-visit costs and adjusted for inflation.

A number of other procedural changes were instituted under the demonstration. First, before an episode payment was made, an abbreviated medical review was conducted to determine whether at least one visit met the Medicare guidelines. Second, an outcomes-based quality assurance (QA) system was introduced, so that quality could be monitored using measures that did not depend on home health utilization. Finally, the demonstration included profit- and loss-sharing provisions—the former to counteract the incentive to reduce the quality of care so as to generate profits, and the latter to encourage agencies to participate in the demonstration.

Mathematica Policy Research, Inc. (MPR) is the contractor responsible for the evaluation of the demonstration. Several other organizations also participated in the demonstration. Abt Associates, Inc. was the implementation contractor responsible for recruiting agencies, monitoring the status of

demonstration operations, and calculating certain statistics required to determine agency payments. Palmetto Government Benefits Administrator (PGBA), the fiscal intermediary (FI), reviewed the treatment and control agencies' claims and payments. The Center for Health Policy Research (CHPR) at the University of Colorado designed and implemented the QA system.

C. METHODS

This report used qualitative data analysis methods to assess the issues posed in this report. We use these methods is because the research questions are too complex to be addressed by an impact analysis. That is, the number of variables that could affect the outcomes of interest is substantially larger than the number of observations in the demonstration, thus making it impossible to conduct an impact analysis. For example, while we can measure the impact of prospective payment on cost per visit, the number of factors that affect those costs (including salaries (and all the factors that affect salaries), technology, real estate costs, supply costs, travel costs, and so forth) far exceed the number of agencies in the demonstration. Thus, to understand *why* some things happened, we must use different techniques.

Our analysis still uses the underlying experimental design by comparing how agencies in the treatment and control group changed during the demonstration. In the first step in the analysis, we developed a conceptual framework that described how we expected the agencies to respond to the demonstration (see Figure I.2). This framework identified how the agencies were expected to change, as well as factors we believed had the potential to inhibit change. For example, we had to consider both internal factors and factors external to the agencies to identify what could have affected the agencies' ability to change their processes of care. We then developed the protocol of questions that we used to explain the conceptual framework. The protocol identified the measures

FIGURE I.2

FRAMEWORK FOR ASSESSING CHANGES IN AGENCY OPERATIONS

Influencing Factors	Internal Context	Decision to Change	Cycle of Transformation	Outcomes
Competition - For patients - For staff Accreditation and License Standards Demand for Care - Case mix of referrals - Perceptions Medicare Regulations	Agency Mission Orientation to Change Internal Rules, Structure, Norms, Management Style Medicare Focus Parent Organization - Hospital - Chain Capital Constraints	Decision to Change Plan for Implementation Support for Implementation	Change Rules, Norms, Practices, Relationships Change Staffs' Perceptions and Practices Refine or Change Decisions	Episode Characteristics - Length - Service mix Costs - Clinical - Administrative Net Revenue Quality Access

Note: The model is based on the approach developed by Huberman and Miles (1984) and on findings of the Phase I case study (Thornton et al. 1994).

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we would use and the respondents who would provide those measures. The master list of questions is in Appendix A.

1. Types of Data Collected

To assess agency decisions and operations, we collected three basic types of data. The data types were (1) primary data collected during site visits to many participating agencies, supplemented by agency documents, such as mission statements; (2) administrative data describing the characteristics of the participating agencies; and (3) information gathered during telephone conference calls to staff running the demonstration, which helped us to determine whether the demonstration was implemented as intended.

a. The Site Visits

MPR analysts visited each of the 67 demonstration agencies.[5] During each visit, which lasted approximately one business day, the analyst interviewed (1) the chief executive officer or director (that is, the person responsible for the routine operations of the agency); (2) the chief financial officer; (3) a senior clinical supervisor, such as the director of nursing; (4) a member of the staff responsible for quality assurance; (5) a member of the staff responsible for utilization review, and (6) two members of the visiting staff (either a nurse and a physical therapist or two nurses).[6] During visits to agencies that were based in a hospital or that belonged to a chain, the analyst also

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[5]The selection of these agencies is described in Section B of this chapter. All site visit analysts were trained to ensure that they all collected comparable data. For additional discussion of these issues, see Phillips et al. (1995).

[6]Because home health utilization was falling dramatically during this period, a number of agencies combined some functions (such as utilization review and quality assurance) into one position.

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interviewed a representative of the parent organization. (A representative of "headquarters" who had an office in a different city or a different region of the county was interviewed by telephone.)

Table I.1 lists the topics addressed during the site visits and Appendix A contains the site visit protocol. It also indicates which staff were asked which questions. Staff were asked questions in their areas of expertise. Some questions were asked of multiple respondents to obtain more than one perspective.

b. Selection of the Case Study Sample

Our initial study design had called for site visits to 66 of the 91 participating agencies. We subsequently included an additional agency so we could study three agencies (members of the same chain) that had merged their administrative operations early in the demonstration.

Our goal in selecting the case study sample was to obtain as much information as possible about various agency environments, decision-making processes, and responses to the demonstration. Thus, we chose agencies that were as varied as possible and excluded agencies if the sample already included members of the same chain organization or agencies that had other characteristics in common.

Table I.2 compares the visited agencies with the entire group of 91 demonstration agencies. Relative to the group as a whole, the case study sample underrepresents agencies belonging to chains; freestanding, for-profit agencies; and agencies in Texas. Agencies from Illinois are somewhat overrepresented in the sample.

All 67 case study agencies were visited within the first six months of their enrollment in the demonstration. Before the second round of site visits (which took place from two years to two and one-half years after an agency had entered the demonstration), four agencies had either ceased

TABLE I.1

TOPICS FOR THE SITE VISITS, BY TYPE OF RESPONDENT

Topic	Chief Executive Officer/Director	Chief Financial Officer	Headquarters Representative	Clinical Supervisor	Quality Assurance Supervisor	Visiting Staff
Agency Characteristics						
Corporate Structure	✓					
Services Provided by Agency	✓			✓		
Services Provided by Affiliate	✓					
Characteristics of Agency Director	✓					
Payers		✓				
Capital		✓				
Agency Mission and Strategic Plan						
Mission and Change in Mission	✓		✓	✓		✓
Strategic Plan	✓					
Geographic Service Area and Branch Offices	✓			✓		
Expected Growth and Initiatives to Expand/Retain Market	✓					
Agency Environment and Patient Mix						
Competition for Home Health Patients	✓		✓			
Competition for Staff	✓			✓		
Managed Care	✓			✓		
Availability of Home- and Community-Based Services				✓		✓
Patient Mix				✓		

TABLE I.1 *(continued)*

Topic	Respondent					
	Chief Executive Officer/Director	Chief Financial Officer	Headquarters Representative	Clinical Supervisor	Quality Assurance Supervisor	Visiting Staff
Demonstration Participation						
Knowledge of the Demonstration	✓		✓			
Objectives of Participation	✓	✓	✓			
Actors in Decisionmaking	✓		✓			
Disadvantages of Participation	✓	✓	✓			
Key Features of the Demonstration	✓		✓			
Demonstration Procedures and Incentives						
Billing and Tracking Episodes	✓					
Flexibility in Care with Abbreviated Medical Review	✓	✓		✓		
Cost-Containment Strategies						
Controlling Per-Visit Costs	✓	✓	✓	✓		
Reduce Visits per Episode	✓	✓	✓	✓		
Relationship with Other Actors						
Former Fiscal Intermediary		✓				
Demonstration Fiscal Intermediary		✓				
Demonstration Implementation Contractor	✓					
Demonstration Training		✓		✓		
Demonstration Quality Assurance Contractor	✓				✓	
Evaluation Contractor	✓					

TABLE I.1 *(continued)*

Topic	Chief Executive Officer/Director	Chief Financial Officer	Headquarters Representative	Clinical Supervisor	Quality Assurance Supervisor	Visiting Staff
Personnel						
Hiring and Training	✓			✓		
Expected Change in Staff Size	✓	✓				
Basis of Staff Payment		✓				
Supervision				✓		✓
Administrative Structure and Procedures						
Changes and Functions Affected	✓	✓				
Monitoring Performance	✓					
Travel	✓	✓				
Computers and Other Office Technology	✓			✓		
Clerical Support	✓			✓		
Burden and Cost of Demonstration Participation		✓		✓		
Referral and Intake						
Referral Sources	✓			✓		
Intake Procedures	✓			✓		
Provision of Care						
Assessment and Care-Planning Procedures				✓		✓
Role of Patients and Informal Caregivers				✓		✓
Use of Care Maps				✓		
Patient Referrals to Community Services				✓		✓
Patient Transfer				✓		✓
Discharge Procedures				✓		✓
Number and Length of Visits	✓					✓

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TABLE I.1 *(continued)*

Topic	Respondent					
	Chief Executive Officer/Director	Chief Financial Officer	Headquarters Representative	Clinical Supervisor	Quality Assurance Supervisor	Visiting Staff
Types of Visits	✓			✓		✓
Productivity Standards	✓			✓		
Quality Assurance and Utilization Review						
Measures of Quality					✓	
Quality Assurance and Utilization Review Procedures					✓	
Accreditation and State Survey Deficiencies				✓	✓	
Shift in Balance Between Cost Control and Quality	✓			✓	✓	✓

TABLE 1.2

CASE STUDY AGENCIES AND ALL DEMONSTRATION HOME HEALTH AGENCIES,
BY CHARACTERISTICS

Characteristic	67 Case Study Agencies[a]		91 Demonstration Agencies	
	Number	Percent	Number	Percent
Chain Membership				
Member	12	18	30	33
Not a Member	55	82	61	67
State				
California	14	21	21	23
Florida	8	12	10	11
Illinois	16	24	16	18
Massachusetts	11	16	11	12
Texas	18	27	33	36
Treatment Status				
Treatment	36	54	47	52
Control	31	46	44	48
Urban-Rural Status				
Urban	58	87	78	86
Rural	9	13	13	14
Type				
Freestanding, Proprietary	27	40	43	47
Freestanding, Voluntary and Private, Nonprofit				
Visiting nurse association[b]	23	34	28	31
Other	6	10	9	10
Hospital Based	11	16	11	12

SOURCE: Abt Associates Inc. recruitment data.

[a]The agency added after the case study sample was selected was a freestanding, visiting nurse association in Massachusetts in the treatment group. The agency is urban. (Only agencies in rural areas in Texas and Florida were eligible.)

[b]Identification of visiting nurse associations was based on review of the agency name and the description of affiliation provided during the site visit.

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operating or had been bought by another entity. Because they were no longer participating in the demonstration, we excluded their data from the qualitative analysis.

2. Analytic Approach

We used pattern clarification as our primary analytic technique for the case study analysis. In pattern clarification, the analyst constructs a matrix of dimensions relevant to a particular research question and then completes all the cells in the matrix for each case (Eisenhardt 1989). After constructing the matrix, we examined the data across treatment and control agencies by systematically and iteratively assessing each case and determining how each data element applied to the research question. Iteration was essential because we developed and reviewed many dimensions in the matrix, and related issues that we may have overlooked on the first-pass examination of the data may have been identified subsequently.

In order to assess the most effective strategies to decrease visits, we also linked the site visit data with Medicare home health utilization data. This linkage enabled us to quantify the reductions in home health services use, and to identify the types of strategies that resulted in the largest reductions.

II. DEMONSTRATION DESIGN FEATURES AND
HOW THEY WERE IMPLEMENTED

The demonstration was designed to test the incentives of a prospective payment system for Medicare home health. To understand why the agencies did—or did not—respond to the incentives as expected, it is also important to understand how they implemented the payment system on a daily basis. Agency management staff that had to devote substantial time to resolving operational problems may not have been able to institute changes in response to the new payment system. In this chapter, we discuss how the three features designed for prospective payment--medical review, financial procedures, and quality assurance (QA)--system were implemented.

A. MEDICAL REVIEW

Palmetto Government Benefits Administrator (PGBA) conducted a limited medical review (known as an "abbreviated" medical review) of the care the treatment group agencies delivered during the at-risk period of patient episodes. This review, which was limited to the admission bill, sought to determine whether a patient met the coverage criteria for home health care, and whether the agency provided at least one visit that met those criteria. As a condition of payment, PGBA required the agency to submit either HCFA 485 and 486 forms (which contain information on a patient's health and eligibility status, as well as on the home health treatment plan) or clinical notes for admissions that coincided with an episode eligible for prospective payment. The medical review was based on these materials. All services paid for under per-visit rate setting were subject to the usual medical review, in which a sample of claims was reviewed to ensure that each visit was medically reasonable and necessary.

All episodes initially were subject to abbreviated medical review. In May 1996, however, HCFA reduced the proportion reviewed in this manner to 25 percent because the claims reviews took longer than expected, and because 100 percent medical review was considered unrealistic under a national program.

The data provided through the abbreviated reviews suggested that the vast majority of patients admitted for an episode of care were medically eligible.[1] The only data available on medical review denial rates were from the period January 1996 through July 1996—the very early part of the demonstration. Only 225 (1.2 percent) of the 18,651 episodes reviewed during that period were deemed medically ineligible. Whether a person meets the criteria to be considered homebound or requires intermittent care can be a matter of some disagreement. Thus, the low rate of denial suggests that the agencies probably were not admitting nonmedically eligible patients. (If we had been able to obtain additional years of data, we might have been able to draw a firm conclusion.)

The data on the number of claims denied, although limited, confirmed the point of view of both PGBA staff and the agencies. In the opinion of PGBA staff, although some agencies had difficulty documenting the need for care, all the agencies generally had been admitting patients who met the Medicare requirements for care. The vast majority of the agencies expressed the same opinion about the process: after resolving initial start-up problems, they had few medical denials, and most of the denials were due to documentation problems.

A small proportion of agencies (19 percent, including all but one agency in Massachusetts) believed the medical review process had a limitation resulting from the definition of "homebound." A beneficiary must be deemed "homebound" to qualify for Medicare-reimbursed home health care.

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[1] Furthermore, PGBA reported that it did not review claims for six of the agencies during that time.

PGBA interpreted this requirement to mean that a beneficiary who left the house on a regular basis to attend adult day care was not homebound. In contrast, the previous fiscal intermediary (FI) for these agencies had interpreted the term such that a beneficiary who required assistance from a home health aide in order to leave the house to attend adult day care was deemed homebound. (For example, a beneficiary with dementia who was unable to rise, dress, and enter the adult day care van without an aide's supervision would have been considered eligible to receive Medicare home health services.) The agencies had provided care according to this guideline and thus believed the medical review system was not working properly. However, this disagreement was not related to the implementation of PPS.[2]

B. FINANCIAL PROCEDURES

Because the payment system was new, a number of financial procedures had to change as well. In this section, we review these procedures and conclude by discussing how our analysis might be affected by the changes.

1. Payment

Agencies selected for the treatment group received a lump-sum payment for the first 120 days of home health care, regardless of the number or cost of visits provided.[3] The agencies were thus "at risk" for the costs of care incurred during that period. Only after both the 120-day at-risk period

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[2]In response to a request from Congress, HCFA recently clarified the definition of "homebound" for adult day care patients in Program Memo A-01-21.

[3]Durable medical equipment, nonroutine medical supplies, and Part B ambulatory home health services continued to be reimbursed at cost throughout the demonstration. In addition, if an agency did not provide one or more of the six Medicare services during the base year but began to do so during the demonstration, then those visits also were reimbursed at cost during the demonstration, as were the costs of care for which Medicare was a secondary payer.

and a 45-day gap in services had elapsed could an agency receive a new per-episode payment for a given Medicare beneficiary. For each visit beyond 120 days that did not begin a new episode (referred to as "the outlier period"), treatment agencies received a fixed per-visit payment rate that varied by the type of visit. They also were paid on a per-visit basis for visits made to patients admitted before the agency began demonstration operations ("phase-in" visits), and for visits to patients admitted within 120 days of the end of demonstration operations in that agency ("phase-out" visits).

According to the original design, after the admission passed the FI's medical review, an agency was to be paid a single "up-front" payment for the 120-day at-risk period. Because an agency was to have received payment for the entire 120 days of care at the time the first claim was processed, it was deemed unnecessary to continue providing periodic interim payments (PIPs).[4] However, some agencies experienced severe cash-flow problems after the new payment system was introduced. In response, PGBA offered a periodic payment system that was similar to the PIP, termed "biweekly interim payments."

2. Prospective Rate Setting

Prospective (per-episode) rates for the at-risk period were based on a treatment agency's costs and episode profile during the fiscal year preceding its entry into the demonstration (the base year), adjusted for inflation and changes in case mix in each evaluation year. The episode profile was defined as the average number of visits provided by the agency during an episode, calculated for each of the six types of visits covered by Medicare. Payments for outlier, phase-in, and phase-out

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[4]PIP was a payment method under the cost-reimbursement system that gave an agency a regular payment based on its average utilization; the rate was adjusted periodically according to the amount of services provided. This system helped smooth the payment for agencies and, by some accounts, decreased the amount of working capital an agency had to have available.

visits were also based on the agency's base-year per-visit costs (adjusted for inflation). HCFA's market basket was used to adjust both the per-visit and per-episode rates for inflation. Both the per-episode and per-visit payment rates were subject to HCFA's statutory home health cost limits.

The case-mix adjuster classified each patient into 1 of 18 groups on the basis of 12 variables that described the patient's characteristics and hospital stay history. From this information, an aggregate case-mix index was created for each agency. After the end of each demonstration year, an agency's case-mix index for that year was compared with its case-mix index for the base quarter (the last quarter of the base year). If the agency's case mix differed from its base-quarter case mix, then its aggregate payment was retrospectively adjusted (as explained in greater detail in Appendix B).

Because this rate-setting system required information based on settled cost reports, inflation rates, and case-mix data that were available some time after a service had been rendered, the agencies did not know what their actual payments rates were for most of the demonstration. For example, most agencies did not know their final payment rates for the first year of the demonstration even during the third and final demonstration year. As a result, the agencies usually were unable to determine whether they had operated at a profit or a loss under the new payment system.

We asked the agencies whether the lack of information on their final rates affected their operations. A substantial minority of the agencies (47 percent) indicated that it did not. Because the delay in receipt of the final rates was the same as they had faced under cost-reimbursement, these agencies continued to operate under the same principle as before. They placed money in reserve accounts to cover potential losses stemming from lower-than-expected final rates, and they continued with their usual operations. Agencies that were members of large corporate chains or hospital systems also indicated that they were unaffected by the lack of financial information. Because they contributed only a small portion to the parent corporations' or hospital systems' total financial assets,

which were substantial, local operating decisions did not affect an individual agency's cash flow or profitability as much as they would have if the agency had been independent.

In contrast, the rest of the prospectively paid agencies (53 percent) believed the lack of information on final rates did affect their operations. In most cases, the agencies acted in a more financially conservative way than they otherwise would have done (see Case Note II.1). Thirty-one percent (of all agencies) responded to the situation by conducting conservative financial planning and making conservative expenditures. They did not want to make decisions until they knew whether they had the resources to cover their expenditures.

CASE NOTE II.1

TYPICAL RESPONSES TO LACK OF INFORMATION ON FINAL RATES

"We are very careful about spending money. The delay in final payment rates keeps us from investing in automation as much as we would like for fear that we will spend money we do not have."

"We have been right at the margin in the financial sense, so not knowing the rates kept us from making purchases. At one point, we were in such a panic mode that we didn't buy a $250 fax machine."

The other agencies cited a range of effects of the lack of final rates on their organizations. For example, some experienced increases in accounting costs because they had to monitor the different payment rate changes. In other cases, management's credibility with the board of directors was affected adversely.

A number of agencies suggested that the lack of a Provider Statistics and Reimbursement (PS&R) report affected their operations even if the lack of a final payment rate did not. The PS&R report tells agencies how many units of service the FI has been billed for and paid. Agencies usually compare this information against their own records to make sure that the FI correctly records all the services it provided; this comparison enables an agency to make ballpark estimates of its Medicare

revenues. Technical and staff problems prevented PGBA from providing PS&R reports to the prospectively paid agencies as promised, and some of these agencies lacked the ability to obtain the statistics from their own information systems. Their information systems were unable to appropriately track the number of episodes and differentiate between visits paid on a per-episode basis and those paid on a per-visit basis. As a result, a minority of the agencies "operated in the dark" during the demonstration—they did not know how much reimbursement they had earned or how many episodes they had provided.

3. Billing

The treatment agencies were required to submit an admission bill to PGBA in order to initiate an episode of care. If PGBA accepted the treatment admission claim (subsequent to abbreviated medical review), then it paid the per-episode payment as a lump sum.[5] Treatment agencies also were required to submit interim bills for services provided during the remainder of the at-risk period (to enable HCFA and MPR to track utilization), although they received payments only for supplies.[6] For services provided near the start of the outlier period, an agency had to "split" its standard bill into two bills—one for services provided up to the end of the at-risk period, and one for services provided from the start of the outlier period. All the bills had to be submitted sequentially to ensure that the FI could accurately identify the 45-day gap in care that ended an episode.

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[5]If the admission claim was denied, interim claims for that episode were suspended for 65 days to await appeal. If an appeal was filed, interim claims were suspended until a decision on the appeal for the admission claim was made. If an admission claim was denied but an appeal was not filed within 65 days, or if the denial of the admission claim was upheld on appeal, then suspended interim claims were released for possible payment under the agency's per-visit rates.

[6]Agencies also had to submit interim bills to receive payment during outlier periods, and to allow for the calculation of costs for profit or loss sharing with HCFA.

When a patient was discharged during the at-risk period or the outlier period, agencies had to submit a discharge bill to terminate the episode, as PGBA would not initiate a new episode for a patient until the previous one had been terminated. In addition, before it would initiate a new episode, PGBA first had to determine that the 120-day risk period and a 45-day gap had elapsed.

Roughly six months into the demonstration, 30 percent of the agencies we visited reported that they had difficulty providing split bills at 120 days (Phillips and Thompson 1997). For the most part, however, the agencies described the problems as "not serious." Not surprisingly, by the end of the demonstration, none of the agencies had difficulty with the split-bill process. The implementation issue had become a "nonissue" after the agencies had become more familiar with the system.

At the beginning of the demonstration, about 20 percent of the demonstration agencies had difficulty submitting discharge bills. These bills were used to delineate an episode's end and to determine whether a new admission to home care warranted another per-episode payment. The agencies learned during the demonstration that the lack of a discharge bill would cause a problem only when a patient was readmitted. Because few patients were readmitted, it was easier for the agencies to submit a discharge bill from a previous episode after a patient had been readmitted and the PGBA system had informed the agency that it would not accept the new episode. For some agencies, this process was much less costly than trying to maintain a consistent discharge billing process for all patients. As a result, only two agencies reported that they continued to have problems with discharge bills at the end of the demonstration.

A new billing problem that arose during the course of the demonstration resulted from the requirement to provide sequential billing. Even in the third year of the demonstration, 19 percent of the agencies reported that they still had trouble billing sequentially. The agencies had two

explanations for their difficulty. First, when a case was sampled for medical review, PGBA extracted the "start-of-care" bill from the batch of bills submitted by the agency and thus did not process this bill with the rest of the bills. Because the agencies did not know which bills were pulled for medical review, they would submit claims for those cases in the following month. PGBA would reject the follow-up bills because the start-of-care bill had not been paid. Most of the agencies that encountered this issue found it be an annoyance, but not a major problem.

Second, some agencies' subcontractors did not always submit bills in a timely manner, but the agencies did not want to wait to submit their own bills because of the strain this delay would place on their cash flow. These agencies opted to be paid under the BIPs payment to avoid major cash-flow problems.

Another billing issue arose during the demonstration because some agencies failed to submit interim bills after the initial episode claim had been submitted. The agencies did not consider their inaction to be a problem, as their payment was based on the initial claim. However, it also resulted in a systematic undercount of the use of services and thus became a major issue for the evaluation. This problem was addressed in the analysis of the use of services. (See Trenholm 2000a, for a description of how the evaluation addressed the problem.)

4. Profit Sharing

HCFA hoped the incentive to make a profit would lead to greater efficiency in service delivery but also realized that some agencies might reduce services at the expense of quality. To counteract this incentive, HCFA shared in any profits above selected levels. If the total of a treatment agency's per-episode payments and per-visit prospective payments was greater than the costs for services covered by these payments, then any resulting profit greater than five percent of total allowable costs for these services was subject to profit sharing. HCFA's share was 25 percent for profits between

5 and 15 percent of total allowable costs; the share increased for profit rates greater than 15 percent by an amount that varied with the demonstration year.

HCFA benefitted from the profit-sharing provision. During the first year, 13 of the 39 reporting agencies had profits exceeding five percent; they returned to HCFA an average of $73,106 per agency. In year 2, 15 of the 36 agencies with settled cost reports returned to HCFA an average of $204,608. In year 3, 12 of the 23 agencies with settled cost reports returned to HCFA an average of $191,910. Thus, the agencies gave back to HCFA slightly more than $6.3 million of the profits they earned during the demonstration.

5. Loss Sharing

HCFA also provided a loss-sharing arrangement as a means of encouraging agencies to participate in the demonstration. It reimbursed the treatment agencies for 99 percent of losses incurred during the first demonstration year, and for 98 percent and 97 percent of losses during the second and third demonstration years, respectively, as long as total payments remained within the national cost limits.

The loss-sharing arrangements figured prominently in the agencies' finances under the demonstration. On average, few prospectively paid agencies earned profits in the first year. As a result, about half the agencies that had settled their cost reports (19 of 39) qualified for loss sharing and received an average payment of $144,062 per agency. In year 2, 16 of the 36 agencies that had settled cost reports qualified, receiving an average payment of $163,322. In year 3, when only 23 agencies had settled their reports, 6 qualified for loss sharing and received an average payment of $176,681. Thus, based on the data available for settled cost reports, HCFA paid slightly more than

$6.4 million for loss sharing through year 3. The total amount paid in loss sharing seemed to decrease over the course of the demonstration, although the average amount per agency increased.[7]

6. Implications of the Payment System

For the most part, the payment system was implemented as planned. Some agencies had difficulties with billing systems, but most problems were resolved by the end of the demonstration. The introduction of a periodic payment system resolved early cash-flow problems. The agencies used the loss-sharing provisions more often in the beginning, while they learned how the demonstration worked, and used the profit-sharing provisions more often toward the end of the demonstration, after they had gained more experience. The evidence suggests that the agencies overcame the challenge of implementing the payment system; hence, implementation problems should not have adversely affected the ability of the agencies to respond to the demonstration incentives.

One payment system implementation issue may affect our interpretation of the demonstration results. Almost half the treatment agencies reported that they altered their behavior in response to their lack of information about their financial situation. Agencies without management information systems to provide utilization and revenue estimates had difficulty assessing their financial situation; as a result, they were very cautious about spending resources. It is difficult to project how these agencies would have behaved if they had had better information. However, if the agencies were correct that they were, on average, more conservative, then the increase in per-visit costs previously reported by Cheh and Trenholm (1999) and by Cheh and Black (2001) may actually have

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[7]Because the data were incomplete, it is not possible to state definitively that the total amount paid decreased.

understated somewhat what would have been reported by a system that provided complete information.

C. WERE THE AGENCIES ABLE TO IMPLEMENT THE QUALITY ASSURANCE SYSTEM?

The collection of quality assurance (QA) data will be an important component of the new Medicare prospective payment system (PPS) for home health. Agencies operating under the cost-based reimbursement system had little incentive to economize on the quality of patient care because their costs were fully covered as long as they did not exceed the cost limits. Under PPS, agencies will have the incentive to limit services provided to patients, possibly jeopardizing the quality of care. The federal government therefore needs a system to monitor the quality of care in a meaningful way—by measuring actual patient outcomes, rather than by using the number of visits or services provided as a proxy for quality care.

During this demonstration, participating home health agencies were required to collect QA data in a process very similar to the Outcome and Assessment Information Set (OASIS) that is used under PPS. The experiences of demonstration agencies in collecting data and using the QA reports generated from the data they collected may help HCFA understand the challenges of implementing OASIS nationwide.[8]

The demonstration required every agency to use a process designed and administered through the University of Colorado's Center for Health Policy Research (CHPR) to collect patient data. CHPR designed two data collection instruments. The "Start/Resumption of Care" instrument collected data at the time of a patient's admission or at the resumption of home health care that

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[8]Indeed, some of the issues noted here were taken into consideration when the final OASIS process was designed.

followed a hospital stay of 48 hours' duration or longer. The second data collection tool, the "Follow-up/Discharge" instrument, was completed at whichever event occurred first: patient discharge, the 120th day after admission, or the last home health visit immediately preceding an inpatient stay of 48 hours or longer. The agencies were required to data enter the information, and to submit it to CHPR. CHPR then checked the data and used that information to produce QA reports for each agency that assessed the agency's case mix and patient outcomes. The purpose of these reports was to facilitate continuous quality improvement at the agencies by identifying areas of weakness. CHPR distributed the reports to the agencies in August 1997 and July 1998.

The QA data collected outcome variables that fell into two broad categories: (1) health measures, and (2) emergency service use. The health measures included basic activities of daily living (ADLs), instrumental activities of daily living, and symptoms (for example, dyspnea). An agency nurse scored each item at each assessment on an ordinal severity scale, and binary changes of "improvement" or "stabilization" could be calculated by comparing the initial assessment with a follow-up score. (CHPR provided feedback to the agencies using that method.) The nurse collected data on emergency service use based on reports provided by the patient, family, or other providers. She recorded any emergency visits to the hospital emergency room, physician's office, outpatient clinic, or freestanding urgent care center.

The demonstration agencies had variable success with the QA system. By the time of the second site visit (in early- to mid-1998), the majority had mostly implement a system that would let them know when to collect data, and on which patients. However, one major problem persisted--the collection of data around an inpatient admission. Furthermore, some agencies doubted the overall validity of this data, and many agencies were unprepared to use their reports as a basis for continuous quality improvement activity although they did use them to change their care processes.

Given the financial pressure under which most agencies had to operate, quality improvement initiatives were given a very low priority, which may have accounted for the difficulty in implementing the data collection system and using the information it generated.

1. Were the Agencies Able to Collect the Data?

For the QA system to work effectively, the agencies had to be able to track the data collection points. Because some of the QA data were collected at events that the home health agencies did not routinely track, the agencies had to implement a new tracking system to collect the QA data for the demonstration.

We found that a majority of the agencies were able to successfully collect the outcomes data at discharge and at the end of the 120-day period. However, seventy-three percent of the agencies had problems collecting data on patients who had an inpatient hospital stay. The primary problem was that agencies rarely knew when a patient had been admitted to the hospital. (See Case Note II.2) Even agencies that were able to identify inpatient admissions almost always could do so only long

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CASE NOTE II.2

DIFFICULTIES WITH COMPLETING
PRE-INPATIENT STAY DATA COLLECTION

Pre-Inpatient Stay Data Collection

It is hard for them to know when patients have been admitted and where they might have been admitted. Sometimes the physician doesn't even know. They can't always reach a family member. Paramedics take them to the closest ER, and the agency sometimes just loses track of them, or if they do find them, the patient doesn't know why they've been in the hospital. Staff have to call the hospital to find out. The RN still fills out the form, even if the aide was the last one there, because the aides do not understand the forms so the information would not be reliable.

"Staff are not doing this at all. If the aide did the last visit, the nurse probably fills it out anyway based on notes or on the nurse's last visit. This form on prehospital condition should not be done anyway because the validity of the data is highly questionable. The resumption of care form is more appropriate."

"We didn't do them. If a patient didn't come out of the hospital, we didn't bother to fill out the forms. Well, what really happened is, we waited to have the person come back, and we would just continue on and fill out the discharge form at the end of care. The nurses felt that the hospital stay didn't make much difference, and many times they went into the hospital for something other than the problem for which we were there."

after the admission had occurred; and, as a result, the agencies were forced to try to complete the data from the case record—a time consuming task that did not always result in complete information. Thus, while most agencies were able to implement three of the data collection points (admission, discharge or 120 days), they could not successfully collect the data around a hospital admission.

2.   How Burdensome Was the Data Collection?

Any quality monitoring system, especially one that collects sensitive patient information that must be protected, is going to require substantial resources to implement.   HCFA's goal is to balance the overall burden imposed by the QA system with its benefits. Part of the burden that HCFA considers is the burden imposed on the agencies. (In this context, "burden" refers to the amount of time the agencies had to spend to complete the instrument and the overall cost imposed by the QA system.)

During the first site visit, many agencies expressed concerns about the length of the QA data collection instruments and the amount of staff time they believed would be necessary to complete them.[9] By the second site visit, the agencies had been able to obtain much more experience with the data collection. They reported that the burden had decreased considerably; the average time required to complete the Start/Resumption of Care form had decreased from 28 minutes to 15 minutes, and the time to complete the Follow-up/Discharge form had decreased from 18 minutes to 12 minutes.

Most agencies ascribed the reduction in the time burden to their staff members' increased familiarity with the forms. Supervisors and managers also reported that complaints from their nursing staffs had decreased considerably, partly because the agencies were using new management approaches to reduce the burden of data collection. For example, several agencies integrated the QA

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[9]The additional burden imposed by the QA system led HCFA to pay agencies to collect the QA data.

data collection into their routine data collection at the time of admission; another agency programmed the data collection tools into the hand-held computers its nursing staff used.

Even with decreases in the time required for data collection, many agencies still considered the QA data collection process time-consuming and costly. The agencies had several types of unanticipated expenses, which added to the burden. First, agencies with high rates of employee turnover commented that the high cost of training new staff members on the data collection had transformed the QA process into an ongoing expense. Second, many agencies reported having to hire additional staff to data enter the QA data collection forms or to check and correct errors in the data. Third, agencies that paid nurses on a per-visit basis had to raise the nurses' rates; the nurses had been discontented about the additional time needed to fill out the data collection forms. Finally, some agencies had to purchase or were contemplating purchasing computer software programs to aid them in the data collection process.

The burden of the QA process was reported to be significant (the 27-minute combined average for the start/resumption of care and follow-up/discharge forms represents half of a 45-minute skilled nursing visit). Despite the additional burden of the QA forms, however, 62 percent of the control agencies were under the cost limits in the final year of the demonstration. Thus, while the costs of the QA process were significant, they were low enough so that the majority of the control agencies could implement the QA system and still keep costs below the cost limits.

3. Did the Agencies Believe the Quality Assurance Reports Were Useful?

Although the primary goal of the QA process is to allow the government to monitor the quality of care, an additional benefit is that feedback is given to the agencies so that they can identify problem areas and improve the care they provide. The question then naturally arises: did the agencies find QA reports useful?

Seventy-two percent of the agencies described the reports as useful and informative. The agencies liked the reports because they enabled them to measure their performance, focused their attention on areas needing improvement, provided benchmark data, and alerted them to sentinel events. Several agencies also stated that the reports proved they could cut costs and maintain quality. They showed the data to their staff to improve morale and used the results as a marketing tool.

While most agencies found the reports useful, some did not. The agencies mentioned several difficulties they had had with the reports. For example, they did not believe the data were accurate, CHPR did not provide the reports in a timely way, the report formats were confusing, and the reports did not give them enough guidance on how to solve their problems. Six agencies did not remember receiving their reports.

In addition to reviewing and possibly sharing their data internally and externally, the agencies took two types of actions in response to the information in their reports. They (1) corrected specific patient care issues, and (2) remedied internal data collection practices.

a. Use of Reports to Change Patient Care Processes

The majority of agencies (67 percent) stated that they had changed patient care practices in response to findings in their QA reports. They gave examples of general changes in the process of patient care, including investigating problem areas highlighted by the reports. They also learned that they had been overutilizing home health aides (a fault they remedied), and that they had to monitor occupational therapy services more closely (which they now do). Case Note II.3 gives some specific example of the process of care changes the agencies made in response to their QA reports.

CASE NOTE II.3	
EXAMPLES OF SPECIFIC PROCESS OF CARE CHANGES	
Area	Examples
Oral medications	Hired a part-time pharmacist to help with oral medications Asked patients to demonstrate their ability to take oral medications Changed the way patients were taught how to take medications Provided more education to patients and caregivers on medications Changed the agency's medication assessment form
Wound care	Conducted a wound care in-service with agency staff Conducted an in-service on wound risk factors with agency staff Developed a wound care program Formed a team to address wound care and developed a care pathway
Pain assessment	Developed a new pain assessment protocol Added more information to an existing pain assessment protocol
Falls	Changed the way patient falls were reported Joined a regional committee to investigate fall-related issues
Therapy	Fired a physical therapist (PT) who had worked on a contract basis and hired a full-time PT Increased the use of therapy to improve functional status

b. Use of Reports to Address Data Quality Problems

Another common response to the QA report was to change the QA data collection process.

Many agencies paid relatively little attention to the QA data collection until they received their first

QA reports. Perhaps the ultimate purpose of the data collection became more apparent only after

the agencies saw their patient outcomes data. Twenty-two percent of the agencies interviewed stated

that they took steps to collect their QA data more accurately after receiving the reports. They

conducted more staff training on the QA instrument and supervised the data collection process more

thoroughly.

4. Were There Differences Between the Treatment and Control Agencies?

Whether prospective payment affected the way the agencies implemented the QA process is an important issue. Compared with agencies operating under cost reimbursement, agencies operating under PPS would be expected to face more limited resources and therefore to possibly find implementing the QA system more difficult.

We found few differences in either the way treatment and control agencies responded to questions about the burden of data collection or the way they used their QA reports. Control agencies' staffs took a few minutes longer than treatment agencies' staffs to complete the data collection at patient admission and discharge, but these differences were not significant. In addition, the agencies' responses indicated that the control agencies found tracking time since admission to be more straightforward than did the treatment agencies. This finding may be explained by the fact that treatment agencies had to track two 120-day periods for the same patient (one for payment purposes and one for QA), whereas control agencies had to track one 120-day period for QA.[10]

5. Balancing Quality with Cost Reduction

We asked the agencies to comment on the pressures of balancing quality of care and cost reduction, and on whether they believed the quality of their patient care had suffered because of their participation in the demonstration. Agency management staff uniformly indicated that their agency provided excellent, high-quality care. They all believed that they were able to maintain quality while cutting costs (or at least while focusing on cost reduction). This finding is consistent with the evaluation's quality of care impact analyses (Chen 2000; and Chen 2001). A minority of staff nurses

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[10]Because the 120-day clock was reset at a hospital admission under the QA procedures, the payment 120-day period did not necessarily coincide with the QA 120-day period. This has been changed for the national Prospective Payment System.

and therapists believed care had suffered. They felt that the "gold standard" was no longer being applied to home health, but they were unable to identify particular incidents to support their perceptions. However, staff from both prospectively paid and control agencies expressed this concern in equal proportions, suggesting that any reduction in the quality of care probably was due to general industry pressures, rather than to PPS.

6. Implications of the Quality Assurance System for the Evaluation

The agencies had difficulty implementing the QA system. Most of these difficulties were resolved as agencies refined their procedures (for example, the time required to complete the forms decreased substantially). Other problems, such as the data collection around the time of an inpatient admission, could not be resolved.[11] However, these failures of the system were unrelated to the home health payment method and thus should not have affected any differences we observed.

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[11] For this reason, this data point was not used in the evaluation of the demonstration.

III. DID THE HOME HEALTH ENVIRONMENT CHANGE
DURING THE DEMONSTRATION?

Environmental changes at the national and local levels may have influenced agency behavior, including the responses of the agencies to the demonstration. This chapter describes changes in the environment in which home health agencies operated during the demonstration and discusses how the changes affected the agencies during the demonstration.

We found that, during the demonstration, significant changes occurred that affected the home health agencies' provision of services. More important, these environmental changes generally affected the agencies in both groups. Thus, impact estimates should be not biased by any of the changes.

A. NATIONAL CHANGES

When the demonstration began, in 1995, the home health industry had been through several years of extremely rapid growth, with many new agencies established, more patients served, and more visits provided per patient. This growth attracted the attention of the federal government. Although HCFA had planned since the early 1980s to institute changes to the payment system for home health, many policymakers believed more immediate steps were necessary to control the accelerating growth.

The federal government introduced two major initiatives during the demonstration period. The Clinton Administration announced Operation Restore Trust (ORT) in 1995, as an antifraud and anti-abuse initiative. The second initiative, the Balanced Budget Act (BBA) of 1997, which took effect in October 1997, was passed by Congress with the intent of placing major new limitations on

Medicare costs, including Medicare home health. Both programs affected the demonstration agencies participating in this project.

1. Operation Restore Trust

The Clinton administration launched this two-year antifraud initiative in five states to curb fraud and abuse in home health and other Medicare-reimbursed services. Four of the states (California, Florida, Illinois, and Texas) also were demonstration states. Although ORT was not implemented nationwide, the program received substantial media coverage. All the demonstration agencies, including those in Massachusetts, were aware of the program even if they did not fully understand what it specifically entailed.

ORT had its largest effect on agency referrals. As part of ORT, HCFA sent letters to physicians warning them not to refer patients to home health unnecessarily. Many agencies observed that, after this letter was issued, their referrals from physicians decreased sharply; both treatment and control agencies cited loss of referrals from physicians because of the ORT-related letters. The result was a decrease in patient volume and, for some agencies, an ensuing increase in per-visits costs. The agencies scrambled to cut their per-visit costs and obtain new sources of referrals.

Although only 15 percent of the 54 agencies visited in ORT states reported that they had been reviewed under ORT, the program also affected operations in other agencies. More than half reported that the new interpretations of regulations on fraud and abuse had induced them to change their operations in some way. Slightly more treatment agencies than control agencies reported that they made changes due to ORT (59 percent versus 48 percent), although there were no differences between the groups in the types of changes made.

Several agencies conducted internal audits or chart reviews to determine their preparedness for ORT review. They examined billing practices and documentation of medical necessity for home

care services, skilled nursing services, and other treatments provided. Other agencies verified that their field staff were providing the number of visits and hours per visit for which they billed. For example, one agency implemented a new supervisory system requiring field staff to call a telephone number to log their arrival time and departure time from a patient's home.

The agencies that did not make changes in advance of a possible ORT review believed they would fare well if reviewed even without changing their procedures. However, they did become more vigilant in guarding against fraud and abuse. For example, some took more care to verify the homebound status of patients before admitting them, and some did more to document the mileage and number of hours their staff billed for travel costs.

Most agencies that made these types of procedural changes (56 percent, or 23 of 41) did not believe patient care was affected. However, many of the 44 percent of agencies reporting that their changes did affect patient care believed the effects had been positive. They believed that their staffs had become more aware of what needed to be done, and that they were better able to explain the goals of their home health treatment plans to the patients. In some cases, the minority of agencies that thought patient care had been adversely affected believed they were discharging or refusing patients who did not strictly meet the definition of homebound (for example, adult day-care patients), but who nevertheless needed home care; in other cases, the agencies believed that physicians were reluctant to refer patients who really did need home health care. According to one agency, time spent addressing fraud and abuse investigations, auditing, and compliance distracted its staff from running the business and fulfilling patient care responsibilities.

2. Balanced Budget Act

Congress legislated changes to the Medicare home health benefit as part of the BBA, including:

- Lowering the per-visit cost limit (known as the Section 223 limits) from 112 percent of the mean cost to 105 percent of the median cost for freestanding agencies in the region. The Section 223 limits were frozen for reporting periods that began between July 1, 1994, and June 30, 1996.

- Defining the maximum payment for an agency by using a new algorithm based on annual per-beneficiary costs or per-visit costs in the base year, whichever is lower. This algorithm is commonly referred to as the Interim Payment System (IPS), because it is intended to last only until the mandated prospective payment system takes effect.

- Eliminating coverage for venipuncture when it is the only skilled service required

- Redefining "part-time" and "intermittent" care[1]

Although the demonstration agencies received waivers that exempted them from the per-beneficiary cost limit, they were affected by the other BBA requirements. A small number of treatment and control agencies reported that changes in coverage for venipuncture and in the definitions of part-time and intermittent care caused them to lose patients. As the original demonstration end date neared, almost all the agencies were preparing to leave the demonstration and face the lower Section 223 cost limits.[2] The agencies (mostly those in the control group) reported that they had begun to reduce the number of patient visits per episode in anticipation of moving to IPS. The reduction in visits by some control group agencies may have led to smaller demonstration impacts in the last year of the demonstration than might have occurred in the absence of the BBA.

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[1]Two other changes were made but had no discernible effect in utilization: (1) redefining service location on the basis of the location of the patient rather than of the agency, and (2) requiring additional billing information (an identifier for admitting physician and visit length).

[2]The demonstration subsequently was extended for the treatment agencies.

B. REGIONAL AND LOCAL CHANGES

In addition to having to respond to changes legislated at the national level, home health agencies were forced to confront market-driven changes affecting their operating environments at both the regional and local levels. These changes often had a greater impact on the agencies' day-to-day operations than did the events occurring at the national level.

In general, all the changes discussed in this section—increased managed care penetration, changes in referral sources, difficulty in hiring staff, and perceived changes in patient acuity—affected the treatment and control group agencies equally. For example, there was little difference in the number of treatment and control agencies reporting an increased presence of managed care or experiencing a decrease in the number of patient referrals. Thus, these environmental changes are unlikely to have affected our impact estimates, although they do help explain some of the agency behavior observed during the demonstration.

1. Managed Care

The growth of managed care plans probably was the biggest change to occur in health care during the 1990s. Historically, Medicare fee-for-service patients have represented a large percentage of a home health agency's revenue, so the growth of Medicare managed care has given the agencies great cause for concern. Significant numbers of patients who had been in fee-for-service Medicare now are covered by managed care plans. Given managed care reimbursement rates that sometimes were close to or even below their per-visit costs and the strict utilization review policies of most health plans, many home health agencies located in markets with high managed care penetration made changes in service provision to meet these demands.

a.   **Spread of Managed Care**

At the beginning of the demonstration, 82 percent of the agencies reported that managed care plans were operating in their areas. The plans did not have high penetration rates in many of these areas, however, so the agencies saw few managed care patients. Two years later, most agencies (84 percent) reported that managed care had become a significant insurer and was more common than at the start of the demonstration. The few agencies that did not consider managed care to be a significant insurer were in more rural areas, where managed care had not penetrated. For example, all three agencies in Massachusetts holding this view were in the more rural, western part of the state. Some examples of the variation in the degree of managed care penetration in demonstration agency markets are given in Case Note III.1.

CASE NOTE III.1

EXAMPLES OF DEGREE OF MANAGED CARE PENETRATION

"We are expecting to see the HMOs come out here this summer, but they are not here yet. There is not enough of a population out here to make money."

"We have seen a little bit of it at the hospital, but literally none in the agency. The Boston HMOs have not reached out here yet."

"The amount of managed care patients has increased recently. Our Medicare visits and revenue are down about four or five percent, and I think most of this reduction is due to Medicare managed care."

"We are seeing a very substantial amount of managed care. Some of the local hospital-based agencies refer the managed care patients to us and keep the fee-for-service patients for themselves."

In areas in which plans were marketing more aggressively than at the beginning of the demonstration, agencies reported tremendous increases in the number of Medicare managed care patients they served. In areas in which Medicare managed care already was established, some agencies reported increased enrollment of Medicare beneficiaries, but not at the high rate they had

anticipated. Medicare beneficiaries may have become more educated about the advantages and disadvantages of enrolling in managed care, and some may have decided not to enroll. In other cases, managed care plans may have pulled out or scaled back enrollment in Medicare products because they were losing money.

Seventy percent of the agencies that had no managed care contracts during the third demonstration year (16 of 23 agencies) stated that they would not pursue them. In the majority of these cases, the agencies' per-visit costs were higher than what managed care was willing to pay. Thus, the agencies would lose money if they contracted with the plans.

b. Impact on Agency Finances

Sixty percent of the agencies reported receiving revenue from managed care sources. Managed care represented an average of nine percent of these agencies' revenues (six percent from Medicare managed care contracts and three percent from Medicaid and commercial managed care) (Figure III.1). The agencies believed that the percentage of their revenue from managed care contracts was on the rise, mostly at the expense of traditional fee-for-service Medicare. According to agency data, the average agency's Medicare fee-for-service revenue fell from 83 percent in the base year to 77 percent in year 3; during the same three-year period, managed care revenues increased from 3 to 9 percent of total revenues.

The majority of agencies argued that managed care was hurting them financially. More than 80 percent of their Medicare, Medicaid, and commercial managed care contracts were reimbursed on a per-visit basis. Because overall agency volume was declining and the cost per visit was therefore increasing, the reimbursement rates the agencies had agreed to in their managed care contracts were now lower than their per-visits costs. As a result, the agencies felt they were losing money on every visit to their managed care patients. The remaining agencies received

FIGURE III.1

AGENCY-REPORTED SOURCES OF REVENUE
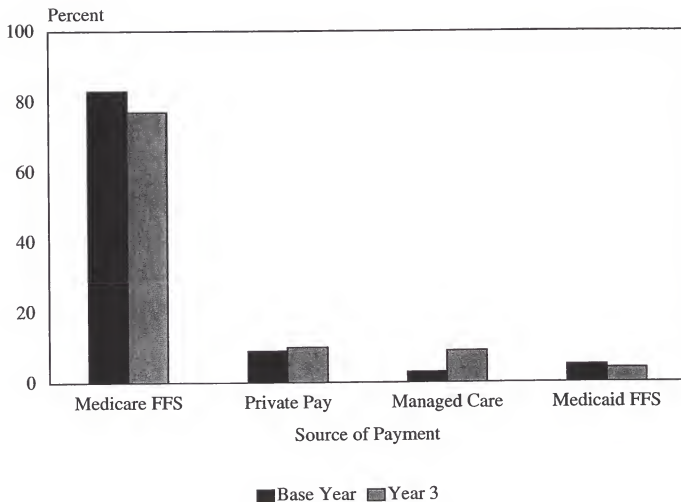
FFS = fee-for-service.

reimbursement for their managed care contracts on a per-capita basis and believed the reimbursement under their contracts was adequate.

2. Changes in Referral Sources

Referral patterns for home health changed substantially during the demonstration. Most of the agencies (61 percent) reported losing referral sources, with a few more treatment agencies (64 percent) than control agencies (56 percent) reporting a loss of this type.

The agencies offered several explanations for the change in referral patterns. In addition to losses of referrals resulting from losses in managed care contracts, hospitals that previously had provided referrals had either affiliated themselves with a different home health agency or opened their own home health agency. In some cases, these hospitals had been the agencies' major referral source. Some examples of changes in referral patterns and competition among home health agencies are provided in Case Note III.2.

CASE NOTE III.2

EXAMPLES OF CHANGES IN REFERRAL PATTERNS

"We are receiving many fewer referrals. Our marketing person says MDs are referring fewer patients in general, not just less to us. I don't know for certain if the hospital is mainly referring to its own home health agency, but the other home health agencies in town think so."

"Prior to the demonstration, about 60 percent of our referrals came from one hospital that has now signed a contract with a large hospital system. Right now we are only getting about 35 percent of our patients from them. We have increased our referrals from other areas to make up for this decline."

"There are two major reasons for the decline in our referrals. First, local hospitals now all have their own agencies, and we see few of those postacute patients. Second, nearly all of our referring physicians see an increasing number of managed care patients who don't have a contract with us. This led to a decline in the number of patients that we can take from these doctors."

The referrals dried up. This was partly because of ORT, physicians afraid to refer to home health. Also, a number of PHOs have formed in the area, and hospitals are opening up their own home health agencies, so the doctors and the hospital refer to those new home health agencies. There's a lot more competition out there.

Despite the apparent instability in referral sources, about 20 percent of the agencies found ways to increase referrals. Many hired corporate marketing directors or dedicated a nurse to conducting outreach with physicians. Some agencies performed community outreach, such as offering flu shots and free blood pressure screenings, so that patients might remember to select them when they needed home health care. Others sought contracts with state programs or Area Agency on Aging programs. Case Note III.3 illustrates how one agency was able to create a new business opportunity when it lost the source of 50 percent of its referrals. In addition to generating new referrals, this endeavor placed the agency in a strong strategic position to operate under PPS.

CASE NOTE III.3

HOW A LOST REFERRAL
SOURCE OPENED A DOOR TO A NEW OPPORTUNITY

This treatment group agency lost more than 50 percent of its referrals when a large hospital in its major Texas city chose another home health agency as its preferred provider. In response, the agency began to look for new sources of referrals. It worked with a physician group to develop a "bridge" program for orthopedic surgery patients who had been discharged from the hospital but who were not yet ready to begin outpatient therapy. These patients were "PPS friendly"—they were generally healthier and required shorter home care stays than the typical patients referred. The agency was able to market this program to other physician groups throughout its area and to expand it to include cardiac surgery patients who were recovering from coronary artery bypass surgery or cardiac transplant surgery.

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3. Staff Availability

At the start of the demonstration, few agencies faced significant staff shortages, but they did have difficulty hiring physical therapists (Phillips and Thompson 1997). We asked agency staff whether the supply of available staff had changed since the start of the demonstration, and whether they had difficulty hiring additional staff. We found that there was significant variation in the availability of staff based on the type of staff and the state (see Table III.1). We also found variations within states between urban and rural areas or between geographically separate markets, such as the Dallas and the El Paso areas. Overall, however, fewer than 25 percent of all agencies

reported having difficulty hiring staff of a particular type, suggesting that staffing issues did not constrain service use in most areas.

The agencies had the most difficulty recruiting nurses, physical therapists, and home health aides. Nurses were reported to be difficult to hire in California, Illinois, and Texas, where 35.7 percent, 21.4 percent, and 23.5 percent of agencies, respectively, were unable to find staff to fill openings. According to many agencies, nurses had more opportunities with managed care organizations and disease management companies. Furthermore, nurses in those markets were receiving offers from hospitals that provided better working conditions and higher salaries or were leaving the field due to frustrations with the changing atmosphere in home health (that is, tighter restrictions on services and increased paperwork required by the quality assurance data collection).

TABLE III.1

AGENCIES REPORTING HIRING DIFFICULTY,
BY STAFF TYPE AND STATE
(In Percents)

Staff Type	California (N = 14)	Florida (N = 7)	Illinois (N = 14)	Massachusetts (N =11)	Texas (N = 17)	All (N = 63)
Nurses	35.7	14.3	21.4	9.1	23.5	22.2
Physical Therapists	14.3	0.0	21.4	0.0	52.9	22.2
Occupational Therapists	14.3	28.6	28.6	9.1	23.5	20.6
Speech Therapists	7.1	14.3	28.6	0.0	11.8	12.7
Medical Social Workers	0.0	0.0	0.0	9.1	5.9	3.2
Home Health Aides	14.3	57.1	28.6	36.4	5.9	23.8

In contrast, only 14.3 percent of the agencies in Florida and 9.1 percent of those in Massachusetts reported having difficulty hiring nurses. (Most of the agencies in those states were unaware of the condition of the nursing labor market because they had no need to hire nurses.) The few that were hiring believed nurses were easy to recruit because both the hospitals and other home health agencies were laying off these staff. The agencies believed these layoffs were a response to the combination of managed care growth and ORT, which significantly reduced the demand for nursing services.

Many agencies that previously had great difficulty recruiting physical therapists (PTs) solved their problem by contracting with physical therapy agencies to supply these staff. This strategy was expensive, but the agencies argued that it was better to pay the costs and be assured of having staff than to worry about being able to meet their patients' needs. At the same time, agencies that continued to hire their own physical therapy staff indicated that it was easier to hire a PT than it was at the start of the demonstration; agencies in Texas were the exception. No agency in Florida or Massachusetts reported having difficulty hiring PTs, but more than half (52.9 percent) of the agencies in Texas reported having difficulty.[3] Thus, if staffing shortages did have an effect on utilization, it would likely be observed in physical therapy services offered by agencies in Texas.

The difficulty in hiring home health aides also varied greatly by state. Agencies in California and Texas reported having little difficulty hiring these staff, but the three other states found hiring home health aides to be a challenge. Because the job pays relatively little, people employed as home health aides may be quickly hired away by rapidly growing retail or other service jobs in an agency's area. The strength of the economy and tight demand for labor in the late 1990s might have enabled people who would otherwise have worked as home health aides to obtain jobs that were less

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[3]It is likely that agencies in Florida and Massachusetts did not report having difficulty hiring PTs because they were not trying to hire these staff. There also could be regional variations in the supply of PTs.

demanding or that offered higher salaries or better benefits. Because of very high turnover in this staffing area, recruiting home health aides might have posed difficulties even for agencies that did not need to expand their home health staff but rather, were merely trying to maintain their staffing levels.

4. Patient Mix

The vast majority of agencies of both types (73 percent of all agencies) felt that patient acuity had increased since the start of the demonstration. Staff members cited two reasons for the increase. First, hospitals were discharging increasingly earlier in the hospital stay. As a result, many patients still were very ill when they returned home, and many had received no education about self-care while hospitalized. The agencies therefore had to provide more patient care. Second, the aging of the population has increased the average age of the home health population. Although this trend was unlikely to have had any major impacts during the short demonstration period, agency staff still believed the trend affected care needs.

A minority of agencies (13 percent) indicated that the acuity of their patients had actually declined. Some agencies believed that more patients who were discharged early from the hospital were entering skilled nursing facilities before continuing to home health care. As a result, the patients in home care were actually healthier and needed less education on self-care than before. In addition, some agencies had obtained a new resource of referrals—mostly new managed care contracts. The staffs of these agencies believe that managed care patients are generally healthier than regular Medicare beneficiaries. Thus, according to this reasoning, winning a new managed care contract would have reduced overall patient acuity for that agency.

C. CONCLUSIONS

The environment for home health changed dramatically during the course of the demonstration. Regulatory changes at the national level, combined with the growth of managed care and local competition, led to sharp declines in demand for most agency services. This shift represented a change from the start of the demonstration, when more than half the agencies anticipated growing by an average of nine percent per year, and another 20 percent expected their size to remain the same (Phillips and Thompson 1997).

In addition, the agencies found it easier to hire PTs in the environment existing at the time of the demonstration than they had during the high-growth years. (In some markets, agencies still had difficulty hiring therapists.) Most agencies also believed that patient acuity was increasing. However, earlier hospital discharge and an aging population—the agencies' explanation for such an increase—are trends that have persisted for many years, and that probably affect cases only gradually. They should not have changed dramatically during the three years of the demonstration.

Because these environmental changes affected the treatment and control agencies equally, we have no reason to believe that they would have biased our estimates of demonstration impacts. However, the incentives provided by the environmental changes, and, in particular, by the BBA and managed care, are quite similar to those provided by the prospective payment system, so control agencies had an incentive to reduce visits and costs. Given that both control agencies and prospectively paid agencies were likely to make the same changes, it was unlikely that we would observe differences between the two groups. Furthermore, it is likely that the differences we did observe were smaller than what we would have observed if the environment had not changed.

IV. AGENCY STRUCTURE AND STRATEGY

In order to assess how prospective payment will affect the home health system, it is important to understand how their operations may change under prospective payment. The variety of business models that thrived under the cost-reimbursement system encompassed a range of agency missions, strategic plans, and management styles. The extensive variation probably developed because the payment system did not reward an agency for becoming more efficient; thus, there was no reason to choose one business model over another. In contrast, the prospective payment system rewards more efficient providers; therefore, we expected that prospectively paid agencies would adopt more efficient business models.

We investigated three key components of the agency business model that might have changed in response to the new payment system. We investigated the first, agency mission, to understand how the agencies' "big picture" goals might have changed in response to prospective payment. If agencies compromised high quality care or charity care because of prospective payment, then policy makers may want to consider including more safeguards in the system. We investigated the other two components, business strategies and management, to determine whether the process that agencies were using to meet their overall business goals had changed. Even if the goals did not change, but the process of meeting them did, this information could be important to policymakers.

A. AGENCY MISSION

All home health agencies provide health care services in the home, but they choose to adopt different missions to provide that care. The agencies participating in the demonstration were no exception. Although at the start of the demonstration almost all the agencies mentioned that providing high-quality care was part of their mission, slightly less than half indicated that delivering

care efficiently was part of it (Phillips and Thompson 1997). About one-third reported that providing care without regard to a patient's ability to pay was an important part of their mission, and one-quarter indicated that fostering patient independence was a key component.

We expected that the prospectively paid agencies would be more likely than the cost-reimbursed agencies to change their mission in response to the demonstration incentives to include more efficient care delivery, and that they might have been more likely to stop providing charity care. However, we found that prospective payment had no effect on an agency's mission, as almost all the agencies in both groups retained their original mission throughout the demonstration. Only three agencies actually changed their mission during that time—one control agency stopped providing charity after being purchased by a for-profit chain; one control agency stopped serving Medicare patients; and one treatment agency added cost-effective care to its mission.

Although most agencies did not change their mission, they did adopt new strategies to continue to meet their mission. What changes did the agencies make? We found that they were more likely to take financial considerations into account when attempting to fulfill their mission. For example, almost all the agencies considered the provision of high-quality care part of their mission. However, many of them also recognized that their survival was not a forgone conclusion. Although few home health agencies failed under cost-reimbursement, especially if they were well-established in the community, the demonstration agencies learned that they could go out of business if they failed to pay careful attention to their finances. Thus, some agencies believed that if they were to continue to provide high-quality care, they would have to pay more attention to the business aspects of operating a home health agency.

Prospective payment may have contributed to this new outlook, but the environment was the driving factor. Cost-reimbursed agencies attributed their emphasis on cost concerns to

environmental pressures to contain service use, including strict utilization review by local health maintenance organizations. Although prospectively paid agencies attributed the changes they made to both environmental pressures and the prospective payment system (PPS), most indicated that the environment, in particular, the closure of many home health agencies, was the main impetus.

Finances also affected the way agencies whose predemonstration mission included charitable care were able to pursue that goal. Most of the agencies in the demonstration with this mission (15 of 18 agencies) "rethought" this aspect of it. As Case Note IV.1 illustrates, a few agencies actually implemented policies to limit the amount of uncompensated care they would provide. Note that none of the agencies intended to stop providing charity care altogether; rather, they wanted to ensure they provided this care in a way that was consistent with their survival.

CASE NOTE IV.1

AGENCIES THAT RECONSIDERED THEIR CHARITY CARE STRATEGIES

"We used to disregard the payer source when we took a patient, but that's no longer true. For example, we had a 25-year-old retarded girl with a feeding tube referred to us, whose father had died, mother had cancer, and other family members were not providing sufficient care. We realized that we were going to provide care for a long time—and she was covered by Medicaid—which means we were going to lose a lot of money. We just had to find a nursing home placement—we just can't afford to lose that kind of money in today's reimbursement environment."

"Our United Way funding has been severely reduced, and we lost another government grant. So the mission statement was changed to 'provide indigent care while maintaining sound fiscal policies.' We still provide some free care, just not as much."

"Our board is wrestling with whether we can take all nonpayers, as the numbers seem to be increasing and increasing. We may limit free care only to people in our immediate community, since that is where most of the fund-raising is done."

The need to "rethink" charity was not the result of prospective payment, as the same proportion of treatment and control agencies with charitable missions sought to limit charitable care. Furthermore, none of the prospectively paid agencies attributed the changes in this area to

prospective payment. Indeed, one agency attributed its ability to *maintain* a charity care program to PPS; it intended to use the profits it earned from Medicare prospective payment to pay for that care. Environmental factors, such as reduced charitable giving to home health agencies, below-cost reimbursement from other payer sources (notably Medicaid), and declining Medicare business (which allowed for less cost-shifting), forced many agencies to reexamine their charity care policies.

B.   BUSINESS STRATEGIES

We expected that prospectively paid agencies would adopt business strategies designed to enhance their performance under prospective payment, but we were uncertain what those new strategies would look like. Some strategies, such as geographic expansion, have both positive aspects (increasing potential market base) and negative consequences (increasing travel costs), so a decision about a strategy will depend on how an agency weighs the costs and benefits. Nevertheless, we expected that more prospectively paid agencies than cost-reimbursed agencies would adopt a method if it was relatively more efficient.

The agencies reported that they were in the process of implementing (or had recently implemented) a wide variety of strategic activities, from opening a wellness/fitness center (in conjunction with a hospital) to "hoping that someone buys the agency."[1] The most frequently cited strategic goals were designed to increase the number of referrals, and the most frequently cited methods to achieve that outcome were (1) implementing marketing strategies targeted to physicians (cited by 43 percent of agencies), (2) expanding the agency's geographic service area (41 percent),

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[1]Note that some strategic goals could take a few years to fully implement. Even if a goal is not fully implemented, however, it provides relevant information about the strategic direction of agencies in the future.

and (3) marketing to the community (27 percent). A few agencies also mentioned strategies to reduce costs or to offer specialized programs.

Almost all the agencies in the demonstration agreed that they wanted to grow—or at least to maintain their size—by increasing their referrals in the future (see Case Note IV.2). However, as Table IV.1 shows, the prospectively paid agencies had slightly (but not markedly) different strategies for achieving that goal. In general, the few remaining agencies intended to shut down or allow themselves to be taken over.

CASE NOTE IV.2

PPS AND COST-REIMBURSED AGENCY GOALS IN THE SAME
HEALTH CARE SYSTEM

"We recently brought together all our home health agencies in our healthcare system to get them to start thinking about planning together. What is interesting is that the strategic planning goals are the same, regardless [of] whether the agency was in PPS or fee-for-service. They all need to have better referral relationships so they can keep their volume up. We've decided that the best way to do this is to make our doctors happy—so we'll focus on changing our practices to meet their needs."

It seems that prospectively paid agencies were more likely than cost-reimbursed agencies to choose to market to physicians and expand their service area. In contrast, the control agencies more often selected unique strategies. For example, one cost-reimbursed agency made the decision that not accepting managed care patients would be a key part of its strategic plan. The agency believed this strategy would both eliminate distractions affecting its staff and increase the quality of care provided. Another agency decided to expand its sales force, and to let those staff identify the best ways to increase agency referrals.

TABLE IV.1

MOST FREQUENTLY PURSUED STRATEGIC GOALS
(In Percents)

	Prospectively Paid Agencies	Cost-Reimbursed Agencies
Educate, Market to, or Organize Care for Physicians	49	26
Expand Service Areas	43	38
Educate or Market to Community	30	20
Reduce Costs	27	3
Create Specialty Disease Management Programs	27	32
Market to Managed Care Organizations	20	16
Develop Programs for Payers Other than Medicare	10	13
Demonstrate High-Quality Care	6	16

SOURCE: Case study data. (N = 62; 33 prospectively paid agencies and 29 cost-reimbursed agencies).

NOTE: An agency may have had more than one strategic goal.

Although many strategies were implemented at about the same rate, we found two differences that could have resulted from prospective payment. First, more than one-quarter of the prospectively paid agencies but only three percent of the cost-reimbursed agencies reported focusing on ways to reduce costs (see Case Note IV.3). Prospectively paid agencies were probably much more aware of both costs and their strategic impact because prospective payment had a large, positive impact on these agencies' cost per visit (Cheh and Black 2000). Because the increase in costs meant that the prospectively paid agencies lost money on their outlier visits, the cost issue was more visible to the managements of these agencies and therefore was more likely to be considered as part of the strategic plan.

CASE NOTE IV.3

PROSPECTIVELY PAID AGENCIES VIEWED COST AS A
COMPONENT OF THEIR STRATEGIC PLAN

"We have lost much of our volume and our cost per visit has risen sharply. Our principal strategy has been to get our costs under control. This has meant both tightening our belts (dropping branches, cutting staff) and trying to expand our market."

"We're in that frame of mind now to be careful how we spend. We recently moved to less expensive office space in order to cut costs. We needed to do this to survive."

"We need to lower our costs. Our doctors and our community expect us to be a cost-effective provider, and we need to meet that expectation."

Second, control (cost-reimbursed) agencies were more likely to implement strategies that could take time to develop, whereas treatment agencies seemed to focus more on achieving relatively short-term results. For example, more control agencies depended on their demonstrations that they provide high-quality care as a way to promote themselves (16 percent, versus 6 percent of prospectively paid agencies). These agencies believed that demonstrations in the market of their superior quality would increase referrals. This strategy takes some time to achieve, however, as it

is necessary to build a track record before the increase in referrals will occur. In contrast, prospectively paid agencies were more likely to focus on marketing to physicians (49 percent, versus 26 percent of control agencies). Many agencies view the physician as the key influence in the choice of a home health agency (see Case Note IV.4). Thus, this focus on a more immediate strategy could be the result of the agencies' experience with PPS, which taught some of them that they could lose money in unexpected ways.[2] Agencies that lost money may also have lost confidence in their ability to survive long enough to

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CASE NOTE IV.4

HOW AGENCIES VIEW PHYSICIANS AS PART OF STRATEGIC PLANNING

"We are doing a lot of marketing and business development with physicians. We are having our nurses do trainings for certain practices at their offices. In response to a physician request, we are sending two nurses to be trained specifically on cardiac care, and those two nurses will do all the patients we receive from that physician group. We'll probably do the same for a physician group who wants nurses trained in pulmonary care."

"We are doing everything we can to keep the doctors happy. We have enhanced our communications systems to make it easier to communicate with them. We are assigning nurse teams to individual physician practices to make sure that the physician has the same nurse all the time. We have expanded our service area so we can cover all of the doctor's patients."

"A lot of our physicians became so nervous from the letters that they received from the government [as part of ORT] that they stopped referring patients. We have undertaken a huge effort to educate them about the benefit—explaining what is medically appropriate home care and what isn't. We need to make the doctors confident that they are prescribing correctly."

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receive referrals. Therefore, they might have been more likely than cost-reimbursed agencies to adopt more aggressive strategies.

In summary, we obtained evidence that the agencies were implementing a variety of business strategies. However, the prospectively paid agencies were focusing their strategies on paths with

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[2]About half the agencies lost money in the first year of the demonstration, mostly because their per-visit costs rose substantially. This loss was unexpected, as most agencies viewed the per-visit system for outlier cases as a "safety" payment mechanism.

potentially more immediate payoffs, as well as considering the potential impacts of high costs. These two considerations are consistent with the notion that the prospectively paid agencies will adopt more efficient business strategies.

C. MANAGEMENT

Agency management is another component of the overall business model that may be affected by prospective payment. Because agencies could earn profits under prospective payment by lowering their management costs, they had the incentive to develop a highly efficient management structure. However, some components of management, especially ownership or affiliations with another organization, are long-term commitments that cannot easily be changed. Thus, we had expected to observe few management changes. In this section, we examine two components of overall agency management: (1) ownership and affiliations, and (2) administration.

Overall, 47 percent of the agencies changed ownership or affiliation during the demonstration. Although they made a number of different types of changes, most merged or affiliated with a referral source or became part of a larger agency by taking over or merging with that agency.[3] The agencies making ownership changes were looking for a way to ensure their survival, and the predominant view was that "bigger" meant a better chance of survival.

Prospectively paid agencies were somewhat more likely than cost-reimbursed agencies to change ownership or affiliation (59 percent versus only 35 percent, respectively). Two factors contributed to this difference. First, health care systems outside the demonstration viewed the experience of working under a prospective payment system as a way to obtain extremely valuable knowledge. These entities therefore considered a prospectively paid demonstration agency as a

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[3]When an agency merged with another agency and remained in the demonstration agency, it counted as one agency.

strategic takeover target—even if the agency was losing money under prospective payment. Second, prospectively paid agencies found that merging their home health affiliates into one larger agency under PPS was financially advantageous. Some of this financial gain came from administrative cost savings; the agencies discovered they could reduce the size of their administrative staff when they merged, and that it was to their advantage to have everyone operate under the same payment and quality assurance system.

With respect to administrative changes, we found that the majority of agencies in the demonstration (83 percent) made management changes at the agency level. These changes included consolidating responsibilities among staff; reorganizing supervisory responsibilities (for example, moving from the use of individual supervisors for each discipline to a team supervisor who was able to cross disciplines); and reorganizing training practices.

About the same proportion of prospectively paid and cost-reimbursed agencies instituted these types of changes in agency management. Seventy-four percent and 83 percent, respectively, did so. However, even though both groups made changes, the *types* of changes differed somewhat. Control group agencies were more likely to consolidate responsibilities among a smaller number of staff (44 percent, versus 29 percent of treatment agencies). In contrast, prospectively paid agencies were much more likely than cost-reimbursed agencies to change supervisory practices (76 percent versus 52 percent) and training practices (88 percent versus 59 percent).

When asked why they made their administrative changes, control group agencies were most likely to cite the decline in their volume of services as the key factor behind the reorganization (cited by 54 percent of the agencies that made changes), followed by the need to reduce costs for reasons other than declining volume (16 percent), and the desire to improve the quality of care (16 percent). A slightly smaller percentage of prospectively paid agencies (40 percent) also cited the decline in

volume as the most frequent reason for administrative changes, followed by the need to realign management after a merger (24 percent), the need to reduce costs for reasons other than declining volume (16 percent), and the desire to improve the quality of care (16 percent). These reports suggest that prospectively paid and cost-reimbursed agencies had different reasons for instituting changes in management practices partly as a result of the observed difference in the groups' ownership and affiliation changes.

Additional investigation of the methods the agencies used to make changes suggested that the differences could have resulted from prospective payment. When asked what they did to make changes in staff supervision, treatment agencies reported that they were supervising their staff more closely; in contrast, few control agencies indicated that they had made this change. Moreover, the prospectively paid agencies reported that they increased supervision of staff in response to prospective payment, as well as to meet JCAHO standards and improve the quality of care. When asked how they changed their training practices, 41 percent of the prospectively paid agencies reported adding new training sessions to teach their staff skills to help them work in the new payment environment (see Table IV.2). In contrast, similar proportions of treatment and control agencies instituted changes to their training practices to meet JACHO accreditation standards and to improve their staffs' understanding of regulatory criteria; the latter reason was prompted by the investigations under Operation Restore Trust.

D. CONCLUSIONS

The agencies changed their business models in a number of ways during the demonstration. Although many of these changes can be attributed to the changes in the environment that we have discussed previously, some were responses to the prospective payment system. We found that the agencies continued to fulfill their missions, but that they also changed strategies so as to explicitly

TABLE IV.2

MOST FREQUENTLY CITED GOALS FOR TRAINING COMPONENTS
INTRODUCED DURING THE DEMONSTRATION

	Percent
Treatment Agencies	
Teach case management, improve teaching and other skills to reduce visits	41
Add competency training required by JACHO	15
Centralize and coordinate training after merger/affiliation	15
Improve staff understanding of regulatory criteria (for example, homebound status)	6
Control Agencies	
Add competency training required by JACHO	17
Improve the quality of care provided by staff	10
Improve staff understanding of regulatory criteria (for example, homebound status)	7

SOURCE: Case study data. (N = 63; 34 treatment agencies and 29 control agencies).

NOTE: An agency may have had more than one goal.

take cost issues into account when doing so. All the agencies attributed this change to the new home health care environment. We also found that the agencies continued to take steps to "grow" their businesses, but that the prospectively paid agencies focused more on marketing to physicians and relied less on indirect longer-term methods to increase referrals. Finally, we found that all the agencies instituted administrative changes. Again, however, the prospectively paid agencies and cost-reimbursed agencies did so in slightly different ways. Prospectively paid agencies made more ownership and affiliation changes, supervised staff more carefully, and instituted new training practices to help staff work better under prospective payment.

V. HOW DID AGENCIES REDUCE THE NUMBER OF VISITS PER EPISODE?

The evaluation's analysis of the impact of the prospective payment system (PPS) on home health service use provided extremely strong statistical evidence that the typical agency receiving prospective payment reduced visits substantially (by 24 percent) in response to the payment system's incentives (Trenholm 2000a). Discussions with agency staff confirm that prospectively paid agencies made aggressive, systematic efforts to control utilization; these discussions provide insights into their strategies for reducing visits. In this chapter, we describe the key factors affecting service use during the demonstration. We also discuss the approaches the agencies took to reduce their visits per episode and the obstacles they faced when attempting to do so. The considerable statistical evidence that agencies cut service use in response to prospective payment leads us to focus more on what the agencies did, rather than to compare the behavior of treatment and control group agencies.

Overall, 85 percent of the treatment group (prospectively paid) agencies interviewed during the last year of the demonstration identified at least one strategy they believed had led to a reduction in service use during the demonstration.[1] More than half (62 percent) of the control group (cost-reimbursed) agencies that we visited also indicated that at least one of their strategies was successful. However, because more of these control agencies also indicated that they were already providing services efficiently, they believed they had fewer options for reducing visits. In addition, the

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[1]Identification of a successful strategy to cut visits is a measure that does not necessarily equate with an observed reduction in service use. Many factors contribute to overall service provision, and it was difficult to obtain a clear perspective on the magnitude of any agency's success. For example, an agency might have introduced a wound care program that successfully reduced visits. At the same time, more difficult wound care patients might have been referred to the agency, possibly giving the impression that visits fell less than they actually did. Nevertheless, this measure is quite useful for understanding an agency's behavior with respect to controlling service provision during the demonstration.

treatment agencies typically took greater steps to reduce visits. For example, although 47 percent of the treatment agencies adopted at least four distinct initiatives to reduce visits, only 14 percent of the control agencies adopted a similarly large set of initiatives. The treatment agencies also reported much more staff resistance and other obstacles to lowering visits than did control agencies, suggesting that their efforts to contain utilization were far greater in intensity. We recognize that other factors could account for the fact that treatment agencies felt they encountered more staff resistance. For example, 93 percent of the treatment agencies but only 59 percent of the control agencies identified factors that inhibited their ability to lower service use, suggesting that agency management might be more inclined to identify problems.

The fact that nearly all prospectively paid agencies chose to cut visits—and succeeded in doing so despite sometimes considerable impediments—raises a number of interesting questions with respect to service delivery under the new payment system. Key among them are:

1. *Motivation for Reducing Service Provision.* What motivated agencies to cut back on service provision under the demonstration? Did factors other than the system of payment play an important role?

2. *Approaches to Cutting Back Visits.* What approaches did the agencies adopt to reduce service use? Which of these was most successful? Why?

3. *Countervailing Factors.* What factors might have limited the agencies' ability to reduce visits? How did the agencies secure the support of field staff, referral sources, and others who might have been opposed to reductions in service provision?

In the remainder of this chapter, we address each of the questions, based on our discussions with agency staff.

A. MOTIVATION FOR REDUCING VISITS: MORE THAN THE FORM OF PAYMENT

Nearly all the agencies in the demonstration had some motivation to reduce, or at least limit, their provision of visits to patients. Not surprisingly, most treatment agencies felt that the strongest motivating factor was the desire to generate a profit based on the change in the payment system. Control agencies also cited a variety of factors as motivation to contain service use, including HCFA's investigations of fraud and abuse, the growth of managed care, and an expectation that cost-reimbursement would soon be phased out.

1. The Role of Prospective Payment

All but 1 of the 29 treatment agencies identifying at least one successful strategy to reduce visits cited the system of payment as a motivating factor. Moreover, when asked to identify the reason for pursuing a particular individual strategy that proved successful, two-thirds of these agencies identified prospective payment as the *sole factor* for at least one strategy, and the remaining agencies identified prospective payment as *a contributing factor* for at least one strategy.

Interestingly, one-third of 18 control agencies that identified a successful strategy to cut visits also linked some or all of their efforts to the demonstration. In each case, they believed that some of form of prospective payment would be adopted in the future, and that their participation in the demonstration had contributed to both their understanding of the payment system and their efforts to begin adopting strategies to control service provision. In the words of the clinical supervisor of one control agency:

> We are in a funny situation. We are currently cost-reimbursed so there is not much incentive to cutting back visits. At the same time, we know this is going to end. Over the last year, we have been scrutinizing our visit count more closely. We now produce a utilization review report that, as it expands, will be used to ensure the patient is receiving the appropriate level of care and that the nurse is using her time constructively....We also recently instituted strict guidelines for visits during the initial nine months after admission.

> We adjust the levels only if I believe it is appropriate or if the admitting physician orders additional care.

Typically, the control agencies that cited prospective payment as a factor behind their attempts to lower service use mentioned other factors as well. Thus, in contrast to our analysis of the treatment agencies' efforts, it is difficult to determine the relative importance of prospective payment to the control agencies.

2. The Role of Environmental Factors

Many important changes took place during the demonstration, some of which served to motivate agencies in both groups to reduce their service provision to patients. A substantial number of agencies cited two factors in particular: (1) HCFA's investigations of fraud and abuse taking place under Operation Restore Trust (ORT), which was launched at the beginning of the demonstration; and (2) the increased penetration of managed care in the agencies' catchment areas.

a. Investigations of Fraud and Abuse (ORT)

Sightly more than half the site visit agencies (54 percent) identified the ongoing investigations under ORT as a factor affecting the care they provided to their patients. Although most of these agencies had comments about the effect of ORT on reductions of referrals by physicians, 10 percent commented specifically on its effect on the provision of services to patients. Moreover, the agencies that adopted successful strategies to cut service use and the ones that did not displayed fairly large differences in their reactions to ORT. The agencies that reported significant changes in response to ORT were also more likely to adopt successful strategies to cut service use. This relationship suggests that ORT may have affected service provision more strongly than reported. Specifically, 60 percent of the agencies reporting a successful strategy to cut service use (28 of 47 agencies) also

reported making changes in patient care in response to ORT. In contrast, only 38 percent that did not adopt a successful strategy to lower visits (6 of 16 agencies) made a change for that reason.

The few agencies that explicitly linked ORT to reductions in service use commented that they had increased their emphasis on a skilled need requirement in response to ORT, thereby reducing some patients' episode lengths. In addition, a few agencies reported that ORT had induced them to reduce visits as a response to the reluctance of referring physicians to agree to certain types of visits, most notably, visits by medical social workers (MSWs).

b. Managed Care

Equal and extremely large proportions of treatment agencies and control agencies (roughly 80 percent of each group) felt that managed care of Medicare patients had increased in their catchment areas since they had entered the demonstration. Roughly half these agencies believed this change had affected the way they cared for their patients. Most of the affected agencies believed that the growing presence of managed care had reduced the number of visits per patient. In fact, for some agencies, managed care was a very strong catalyst for controlling use, as visiting staff reacted to it by becoming more amenable to and more capable of adopting strategies to lower service provision. However, this positive perspective on managed care was strongly tempered by concerns that the external restrictions placed on visits to managed care patients had the potential to undermine care quality. A good example of this "dual perspective" is given in Case Note V.1.

> **CASE NOTE V.1**
>
> **THE POSITIVES AND NEGATIVES OF MANAGED CARE**
>
> "Most managed care companies look at things on a procedural basis; they don't look at the whole patient....Anecdotally, this is really affecting quality of care. If there's someone in the home who can be taught how to do things, then it's ok, but if there is no informal caregiver, there is a real problem. But on the positive side, it does modify the behavior of the nurses—gets them accustomed to shorter visits and episodes."

Interestingly, the agencies with few or no managed care referrals seemed to have the strongest criticisms of managed care, possibly because agencies without exposure to managed care failed to realize that staff can learn to "do more with less." Agencies that never tried to reduce service use may believe that visit restrictions would harm their patients' well-being when, in fact, they just do not know how it will affect them. Alternatively, these agencies might have tried to work with managed care organizations in the past, only to discover that the restrictions negatively affected their patients. (Only one agency commented that this had occurred). Overall, the agencies with little managed care growth in their communities were somewhat less likely to be able to lower Medicare home health visits per patient (75 percent were successful, compared with 87 percent of agencies in communities with substantial growth). Their lack of success might have been linked to their failure learn from managed care experience.

B. STRATEGIES TO REDUCE SERVICE USE: WHAT WORKED, AND WHY?

We have referred several times to the fact that the agencies planned and then usually implemented various strategies to reduce visits during the demonstration. In this section, we describe the nature and frequency of these strategies and then discuss which ones proved most successful, and why.

1. Planned and Implemented Strategies

As listed in Table V.1, we identified 16 unique strategies that the demonstration agencies had planned and implemented. A useful categorization of these strategies is given by their orientation or focus, which we define in the table as managerial, technical, or operational. Strategies with a managerial orientation were those imposed on visiting staff by management. They included increasing supervision of visiting staff, motivating or encouraging staff to support service reductions, placing strict limits on visits per patient, changing the form of payment (typically to something other than a per-visit payment), and creating a more favorable (low-use) patient mix. We defined strategies with a technical orientation as those carried out by visiting staff with the goal of improving or otherwise changing the content of the care provided. These strategies included providing clinical training (for example, on new wound care techniques); hiring staff with specialized credentials (most notably, wound specialists); adopting care maps or clinical pathways; increasing the use of equipment; improving the home environment; and better educating patients and caregivers. Finally, we considered strategies with an operational orientation to be distinct from technical approaches because they affected patient care only indirectly, through changes in the timing, setting, or source of care. Operational strategies included relying on the telephone for patient followup, eliminating duplicate or redundant visits, changing the timing of visits or the visit mix, and increasing reliance on family and community resources.

The most popular of the 16 approaches, adopted by two-thirds of all the prospectively paid agencies and half the control agencies, was increased supervision. This management-centered approach took a number of different and unique forms; in every case, however, the goal was the same—to make the visiting staff more accountable for the services they provided. A second relatively popular management-centered approach entailed adopting explicit efforts to obtain staff

TABLE V.1

STRATEGIES TO REDUCE THE NUMBER OF VISITS PER PATIENT

Managerial Strategies

Increase supervision
Motivate staff to support change
Restrict visit count (managed care approach)
Change payment structure (eliminate part-time staff, per-visit payment)
Create favorable patient mix

Technical Strategies

Improve staff training
Add specialists (for example, wound care specialists, dieticians)
Adopt care maps/clinical pathways
Use more equipment (for example, IV equipment, prefilled syringes)
Improve environment
Improve patient/caregiver education

Operational Strategies

Change visit mix
Change timing of visits (for example, "frontload")
Substitute telephone contact for personal visits
Eliminate duplicate visits
Increase reliance on family/community resources

SOURCE: Case study data.

support for reducing visits (that is, to have staff "buy in" to the concept that the patient is better off as a result of these reductions).

The agencies also instituted various technical-oriented approaches. The most popular one, adopted by 19 agencies, was to use care maps. Several other agencies planned but did not implement this approach.[2] Other relatively popular approaches, identified by at least six agencies, were the use of specialists and better patient education. All three of these approaches were commonly implemented as part of a larger effort to accelerate patient independence; indeed, more than half the agencies that adopted one of these strategies adopted a second one as well. Finally, although operational approaches were used less frequently than management or technical approaches, a fair number of agencies did adopt them. At least 10 agencies tried to reduce visits by increasing reliance on family and community support and by changing the timing of visits. Most often, the central goal of each of these operational strategies was to reduce the time until discharge. For example, a common change in the timing of visits involved using MSWs as early as possible in order to prepare patients for discharge.

It is important to stress that most agencies adopted more than one strategy. For example, certain technical approaches, such as better or earlier patient education, typically required commensurate operational changes, such as making longer visits earlier in the episode of care. Likewise, agencies that adopted managerial approaches were quite likely to adopt a host of technical and operational strategies as well. In particular, most agencies that worked to motivate staff to support patient independence pursued numerous strategies linked to early discharge, such as improved patient education, visits from specialized staff, and greater reliance on family and community support.

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[2]Care maps are discussed in more detail in Section C of this chapter.

2. Most Successful Strategies

More than half the agencies that adopted a particular strategy deemed it to be successful, suggesting that most agencies had more than one option to reduce visits effectively. Of the strategies listed in Table V.1, four clearly stand out as being the most strongly linked to successful reductions in visits. In the following section, we discuss each of the four strategies in detail.

a. Improve Supervision

As noted, better supervision of the field staff was the most widely adopted approach. Based on the agencies' self-reports, it was one of the most successful. Indeed, every one of the 23 prospectively paid agencies that identified improved supervision as an explicit strategy felt that it had led to a decline in visits; more than one-quarter singled it out as a key to their success in this area. Typically, the agencies improved supervision by making better use of the utilization review procedures they already had established or by adapting the review procedures of the managed care organizations with which they had contracts.

Four agencies made large-scale changes in supervision, including the wholesale restructuring of management duties and responsibilities. For example, one medium-sized, prospectively paid agency organized all its visiting staff into three teams, each headed by a newly appointed team leader. Each team leader was chosen from the existing staff of visiting nurses and served principally as a case manager, meeting regularly with the lead nurse or therapist to determine the proper level of care, and to help counsel on discharge. The team leaders then reported to the nursing supervisor, who continued to provide general oversight and management to the field staff. In the opinion of both the CEO and the nursing supervisor, this additional layer of management was "very effective" in

controlling service utilization. The three other agencies that made similarly large-scale changes also believed their actions had been successful in controlling utilization.

b. **Motivate Staff to Pursue Patient Independence**

According to 10 agencies, including some that had made particularly large reductions in service use, the key to their success lay in motivating and educating their staffs to change their focus from providing support to encouraging independence. In general, the central goal of this effort was to teach the staffs to bear discharge in mind from the outset of an episode of care, and to provide care with this goal in mind. Comments from several agencies, presented in Case Note V.2, clearly illustrate the extent of this effort.

CASE NOTE V.2

MOTIVATING STAFF TO REDUCE VISITS

"Basically, we really just worked and worked and worked at educating our staff....It is natural for them to just 'do' rather than teach, and most nurses would rather take care of a patient than make them independent. But we just kept promoting it—nothing dramatic."

"We have really improved our nurse education. We have ended 'friendly' visits. Patients today are much sicker, and the nurses can see that they are getting much better much faster."

"The basic approach, planned two years ago, was to change the visiting staff mindset away from more is better."

"Education of the nursing staff about the need for getting in, training and teaching, and getting out."

"We are first changing the mindset of the nurse. We now have her focused on making the patient independent. Nurses have learned to take care of patients; they now teach them to be independent. We also get in other services right up front—we get in psych nursing to deal with depression so the patient can learn, and we get social workers in there to set up services—which in the past we left until discharge."

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c. Improve Patient and Caregiver Education

As some of the examples in Case Note V.2 illustrate, improved patient (and caregiver) education was often a critical element in the agencies' plans to reduce episode lengths and, therefore, visits. Indeed, when coupled with either increased supervision or staff motivation, the agencies viewed patient/caregiver education as successful (and often highly successful) in 10 of 11 cases.

Most patient education generally focused on self-care techniques. However, in parallel with their focus on reducing the number of visiting staff, a few agencies noted the importance of educating patients about the goal of their visits—to teach them to become independent as soon as possible. The agencies considered it particularly important to educate patients who had received home health services in the past and therefore may have been used to a long-term care approach.

d. Change Timing of Visits

The agencies also recognized that strategies to change the timing and, perhaps, mix of visits (by "frontloading") were critical to achieving earlier discharge. Furthermore, when linked with improvements in supervision or education of nurses, such a strategy also led to consistently lower visits per episode. The change most often cited (by six agencies) was to bring an MSW into the home as soon as possible after admission in order to quickly establish the necessary support system and prepare the patient for discharge. Intensifying visits (providing more visits and longer visits) early in the episode for particular types of patients, such as those requiring wound care or extensive therapy, was also cited as a successful method of getting patients out of home health sooner, thereby lowering service use. As described in Case Note V.3, one quite successful agency (whose visits fell 24 percent relative to its base year) also observed that the heavy use of visits early in the episode greatly reinforced its patient education efforts.

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│                      CASE NOTE V.3                           │
│                                                              │
│              BENEFITS FROM FRONTLOADING VISITS               │
│                                                              │
│  "Frontloading of visits is very important to reducing visits│
│  overall because patients learn faster when you             │
│  reinforce what they have learned immediately.  Also, the   │
│  patient seems to take more responsibility for              │
│  their own care with frontloading."                         │
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C. COUNTERVAILING FACTORS: CHALLENGES TO REDUCING VISITS AND METHODS TO OVERCOME THEM

The agencies faced numerous obstacles in their efforts to reduce the number of visits. As noted, treatment agencies tended to discuss these obstacles in much greater detail than did control agencies, most likely because they had made greater efforts to lower utilization and thus had encountered more obstacles to making this change. Regardless, most treatment agencies clearly were able to institute large cutbacks, suggesting that the obstacles to change usually were surmountable. In this section, we summarize the obstacles and describe the methods the agencies used to overcome them.

1. Staff Resistance

Some agencies faced significant resistence from their field staff to lower the number of visits provided to a typical patient, particularly when the efforts centered around earlier discharge. In almost every case, the staff were concerned that this change would adversely affect patient well-being. However, the staff sometimes feared that cutbacks might decrease their hours of employment or even lead to layoffs. In at least four agencies, this concern was further fueled by substantial declines in patient volume early in the demonstration, which had already led to significant reductions in staff. Indeed, at least one agency expressly avoided making much of an effort to reduce visits during the demonstration because it wanted to retain as much staff as possible in the face of lost market share.

Clinical supervisors and others also complained that some staff members did not resist change, but rather, were unable to adopt it. As one agency member put it, "[PPS] requires a new type of thinking. It is no longer enough to be a great caretaker; you have to be a business person as well." The agencies were most commonly frustrated with their senior nurses. Some supervisors believed these nurses would simply never understand why changing their care practices might benefit both the agency and the patient.

Staff resistance was particularly acute in certain types of agencies. Most noticeably, agencies that had little experience with managed care patients were more likely to cite staff resistance to the idea of cutting back on service provision than were agencies with considerable experience in this area. It is possible that staff with little managed care exposure had less experience with limiting utilization and therefore were less willing to reduce visits when instructed by management to do so. In contrast, staff members who served managed care organizations may have learned how to reduce care without harming patients (although perhaps not as much as the managed care organization wanted). Agencies with a large proportion of contract staff also reported particularly strong resistance to cutbacks. Contracted therapists complained the most strongly. As Case Note V.4 indicates, the agencies believed these therapists were both particularly resistant to change and extremely difficult to supervise or motivate.

CASE NOTE V.4

RESISTENCE AMONG CONTRACTED STAFF

"We were using contract PTs for a while. When I would review the charts, there wouldn't be a medical necessity any longer, and I would ask the PT to discharge the patient. They would turn around and tell the patient to go to one of their other agencies (because the therapist worked on contract for several). For this reason, I stopped using contract PTs, though now we have a problem because our staff PT is on military leave."

The agencies used a variety of methods to address staff resistance (or inability) to change; some of these methods were more successful than others. Increased supervision and staff motivation/education clearly were the most common approach and, as described above, was generally viewed as successful. One particularly interesting approach, which a few small agencies used successfully, was to communicate regularly with field staff about their financial viability. As one agency CFO explained, "We basically opened our books to the nursing staff and said, 'This is our financial status right now, this is what the future holds; unless you are willing to make these changes, our agency will not survive.'" Another agency adopted a similar method:

> We have worked hard to give the staff a sense of the current budget realities. For example, we ran a recent seminar discussing the IPS and the BBA. Most of them recognize that we must be competitive—they have seen layoffs elsewhere—and that this means keeping [total] costs under control. We have worked with them to recognize that getting the patient independent is the real goal. The home health aides are the toughest to convince of this, but in general, the staff has been responsive.

Ironically, loss of market share also helped, as some agencies were able to terminate unsupportive staff. A clinical supervisor commented:

> The nursing staff runs hot and cold. Some understand the need to decrease the length of stay, discharging the patient as soon as possible and readmitting if there is need....Others really want to keep people on in case something happens. You have to bird-dog them more or get rid of them.

Agencies that experienced growth during the demonstration had opportunities to hire staff whose philosophy of care was to provide only the number of visits needed.

2. Resource Constraints

Budgeting and staff limitations prevented some treatment agencies from adopting as many changes as they would have liked. Not surprisingly, this problem was more common among small

agencies, which typically lacked access to the capital needed to pursue such strategies as investments in newer technology (for example, hand-held computers), care maps, and technical training. However, most of these small agencies were able to pursue other effective strategies, particularly strategies with a managerial orientation, such as increased supervision. Agencies with declining market share or increased managed care penetration during the demonstration faced a more serious obstacle. These agencies, often moderate to large in size, devoted much of their efforts to remaining competitive (or even solvent); in some instances, this goal greatly constrained their efforts to lower utilization. For example, one agency got into serious financial trouble when it lost a major referral source and its senior financial management staff during the same time. Other managers had to focus on solving the agency's financial problems and had no opportunity to implement visit-reducing strategies. Indeed, four of the nine treatment agencies that identified this obstacle did not reduce visits during the demonstration.

Substantially more than half the agencies complained that specific aspects of the demonstration or demonstration procedures had wasted management time and/or agency resources that might otherwise have been dedicated to lowering utilization or costs. Some of the more common sources of complaint included the move to a new fiscal intermediary, long delays in payments, and high rates of bill rejection. The greatest source of dissatisfaction by far was the demand on staff time that the demonstration's quality assurance (QA) requirements imposed.[3] Many visiting staff complained about the time needed to complete the QA instrument, and several supervisors described the difficulty of attempting to induce their nurses to complete the instrument in a timely manner. A variety of agency staff also complained about the time needed to process and report the information from the QA instrument. Indeed, the management of a number of agencies described being

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[3]The QA requirements are discussed in detail in Chapter II.

overwhelmed by the time requirements of the QA, particularly at the start of the demonstration, and reported very substantial delays in providing this information for review. Small agencies, which often lacked the resources to hire a dedicated individual to handle the QA information, were the ones that most often cited the QA process explicitly as an obstacle to controlling utilization or costs.

Interestingly, the use of care maps was the one strategy that appears to have been affected by staff time constraints. Care maps, also referred to as critical pathways, are descriptions of care to be provided under different circumstances. Care maps provide nurses with a guide as to how much service to provide, which will lower use by nurses who tend to plan more. Near the start of the demonstration, 29 agencies (17 treatment and 12 control agencies) had planned to implement or expand care maps in the near future; two years later, at least 13 of the agencies (6 treatment and 7 control agencies) had scaled back or discarded these plans. The agencies provided several explanations for not implementing the care maps, including lack of time to train staff and dissatisfaction with the clinical effectiveness of this tool. Only a few agencies cited a failure to control utilization as their reason for abandoning the strategy of using care maps.

3. Patient Characteristics and Well-Being

Many agencies claimed that their patients' health was worse at admission than before the demonstration had begun.[4] In some cases, this belief may have encouraged the agencies to develop strategies to offset the reduction in visits. In particular, some agencies claimed that hospital-based agencies were "dumping" the most severe cases on them, particularly when the Interim Payment System was implemented for those outside the demonstration. A number of field staff also indicated

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[4]Statistical data do not support this claim although it may have been true for a few agencies. Trenholm (1999) observed that the case mix for patients admitted during the demonstration and for those admitted immediately prior to it had changed little.

that they were seeing more patients who lacked any family or support networks. (Most staff members within the same agency held inconsistent views on this issue.) Management-level staff of five agencies cited the absence of family support as a significant obstacle to their ability to reduce visits because it limited efforts to accelerate discharge and increased the need for aide visits in conjunction with skilled care.

At the management level, only two agencies expressed concern that their cutbacks may have harmed patients. In fact, several agencies felt that the efforts to encourage self-care and independence ultimately increased patient well-being. However, roughly one-quarter of the agencies that reduced visits only slightly or not at all cited their patients' well-being as a key reason for not focusing on this activity. Moreover, some agencies that did cut back the number of visits doubted whether they could lower visits much further without compromising patient outcomes and care quality. Interestingly, control agencies expressed this view more often than did treatment agencies (10 and 4 agencies, respectively), even though the observed reductions in control agency visits were (on average) much lower over the course of the demonstration. Nevertheless, the fear that patients could be negatively affected by cutbacks seems to have been a key obstacle for at least a few agencies and may have played a more minor role for several others.

D. WHAT FACTORS HAD THE GREATEST IMPACT ON SUCCESS?

Although identifying strategies that proved particularly successful is fairly straightforward, explaining *why* something was successful is more challenging. Indeed, because agencies "self-selected" strategies they believed would work, it is not clear how well the success of any particular strategy can be generalized. Nevertheless, our interviews with agency staff do provide clues about why some strategies proved more successful than others.

We observed that particularly successful strategies shared one characteristic—they were not implemented in isolation. For example, all but 1 of the 22 prospectively paid agencies reporting that increased supervision was successful also implemented at least one other strategy that succeeded as well. Indeed, the agencies that were most successful in reducing visits not only implemented strategies in combination but typically did so as part of a large-scale effort to control utilization. For example, 6 of the 10 agencies we visited that were able to lower visits per patient by more than 25 percent implemented at least five reduction strategies; only 1 implemented fewer than three strategies. A good example is given in Case Note V.5, which describes the efforts of a treatment agency with a relatively low average visit count before the demonstration (28 visits per patient) that nevertheless achieved a further reduction of 8 visits (or 28 percent) through a combination of at least five strategies.

CASE NOTE V.5

COMBINING STRATEGIES TO LOWER VISITS, I

The agency has substantially increased its supervision. Staff used to just go out, open a case, and see a patient as long as they thought was appropriate. Now they have to call a manager upon opening an episode and get authorization to conduct visits for periods of two weeks. The agency has had lots of in-services, encouraging them to educate patients. Staff now are expected to start teaching on the first visit. They also give much more literature to patients. The agency has been using social workers more to facilitate discharge, and it has increased the role of ET nurses and reenforced their use to the staff. Now, an ET specialist must see all serious wound care cases. The agency has also invested in better equipment. For example, it uses wound supplies that accelerate healing and found a better working IV pump, which it recommended to physicians as a way to reduce visits.

It is also perhaps instructive that at least 4 of these "top 10" agencies, including the one described in Case Note V.5, pursued *all* the strategies cited as being particularly effective; they increased supervision, motivated staff, improved patient education, and changed the timing and mix

of visits. Consider, for example, the summary comments in Case Note V.6 on another agency that lowered visits during the demonstration by 32 percent (from 62 to 43 visits per patient).

CASE NOTE V.6

COMBINING STRATEGIES TO LOWER VISITS, II

The first change adopted by the agency was to increase supervision of utilization. The clinical supervisor increased her conferences with the case managers from once a month to once a week, and she greatly increased her focus on utilization. The key point that was now stressed was to "get the patient independent ASAP." Commensurate with this change, the clinical supervisor instructed the case managers to change the pattern of care provided by field staff. This included thinking discharge from the outset, getting the MSW in early to facilitate and speed discharge, and educating patients and family members on patient care. Case managers were then instructed to get their teams on board and to help reeducate them to the new payment realities—"smaller pay means shorter episodes and fewer visits."

It is likely that the degree to which agencies faced obstacles to effective implementation of the use of reduction strategies also affected the success or failure of the strategies (see Section C of this chapter). For example, a major obstacle noted by many agencies was an unwillingness or resistance to curtail service use, presumably because of concern that their patients' well-being would be adversely affected. Thus, the agencies that were most successful in decreasing visits were those that used multiple strategies and encountered fewer obstacles to effective implementation.

E. CONCLUSIONS

Our interviews with agency staff provided a unique perspective on how agencies might be expected to change their service provision as they make the transition to a national system of prospective payment. Four findings from these interviews are perhaps most instructive:

1. *All agencies should have some opportunity to lower visits in response to prospective payment.* An agency must be willing to adopt particular strategies and must have the ability to carry out each strategy effectively in order to reduce visits. However, we found no evidence that agencies in particular circumstances cannot reduce visits.

2. *Certain strategies seem to be particularly successful in lowering service use.* They include increasing supervision of visiting staff, encouraging staff to promote independence of their patients, improving patient education, and changing the timing of visits.

3. *These strategies appear to be most successful when used together or in combination with other approaches.*

4. *Numerous obstacles threaten the agencies' ability to lower visits per episode, and some may affect smaller agencies disproportionately.* Staff resistance to lowering service use, limits on available capital and managerial resources, and the demands of providing QA information appear to be the most serious ones.

VI. THE PROCESS OF CARE DURING THE DEMONSTRATION

Dramatic changes occurred in the home health industry while the Medicare home health per-episode prospective payment demonstration was in effect. Some were systemwide ones induced by changes in the environment, and others were changes resulting directly from the demonstration. Previous reports showed that the prospectively paid agencies significantly decreased their service use (Trenholm 2000a); the previous chapter explained how the agencies achieved this objective. Other changes in care might also have taken place that were unrelated to the decrease in home health use, and some of them may have affected the quality of care or access to care. Thus, it was important to examine the effect of prospective payment on the process of care from a broader perspective.

In this chapter, we discuss two questions about the process of care during the per-episode home health prospective payment demonstration:

1. Did the process of providing Medicare home health care change during the course of the demonstration?

2. Did per-episode prospective payment cause these changes, or were environmental factors the cause?

In addition, we examine the extent to which demonstration agencies adopted two approaches—the use of portable computers by clinicians and the use of critical pathways—that have the potential to improve the efficiency of the process of care.

A. INTAKE PROCEDURES

Because the home health care process begins with intake, we begin our examination of change in the process of care with that step. Prospective payment could have affected the intake process in

two ways. First, because prospectively paid agencies could earn profits by reducing costs, we expected them to streamline the intake process to save money. However, these agencies also could have earned profits by favorably selecting low-cost patients (and avoiding high-cost patients). Thus, they might have augmented their intake procedures to obtain more information about patients and their potential costs.

Instituting changes in intake procedures was quite common during the demonstration. About three-quarters of the agencies we visited reported having instituted at least one such change. Nevertheless, we found little evidence that per-episode payment caused the agencies to take this step when they would not have done so otherwise. The percentage of prospectively paid agencies reporting change in intake procedures (from any cause) was essentially the same as the corresponding percentage of cost-reimbursed agencies (74 and 79 percent, respectively). Although some of the prospectively paid agencies (25 percent) attributed their change in intake procedures to the demonstration, they reported that other factors also affected their decision in this area

The agencies made two major types of changes in their intake procedures: (1) collecting additional information, and (2) centralizing or decentralizing intake. Although both types were consistent with the financial incentives offered by the prospective payment system, the agencies reported making the changes for reasons that were unrelated to the demonstration. They stated that they collected additional information on patient condition to make improvements in care that would meet Medicare regulations and certification requirements of the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO). Given increased emphasis on strict interpretation of the Medicare regulations (as a result of Operation Restore Trust [ORT]), agencies were much more careful to ensure that a Medicare beneficiary was homebound and that he or she needed skilled care. One agency reported expanding information collection to include data on

allergies and on the availability of caregivers because that information had been added to the JCAHO requirements.

A few agencies (in both groups) reported changing intake procedures to collect information to distinguish "heavy-care" patients and patients who lacked informal caregivers to assist with personal and routine health care. The agencies provided various reasons to explain why they were collecting this information, but it seems that they were seeking to identify heavy-care patients with few supports in order to avoid admitting those who could not be cared for appropriately at home. For example, one agency expressed concern about the appropriateness of home care for patients who were referred by nursing homes after their nursing home benefits had been exhausted. Note that, despite a financial incentive to avoid these patients, our empirical analysis found no evidence that prospectively paid agencies were avoiding high-cost patients at first admission; however, we did obtain a little evidence that they may have been avoided at subsequent admissions (Trenholm 2000a). Because the intake process was unlikely to provide new information on subsequent admissions, it appears that these changes were designed to promote quality, rather than avoid high-cost patients.

The agencies also revised their intake procedures to collect additional information about the source of payments; this action was designed to enable them to avoid payment problems. Unfortunately, despite these efforts, they continued to have difficulty obtaining reliable payment information. The agencies reported that, because patient reports often were inaccurate, they made greater use of HCFA's common working file to check health maintenance organization (HMO) enrollment status. One informant noted, "[We] have really gotten burned a couple of times serving someone who had signed up for an HMO and didn't know it."

About 15 percent of the agencies we visited centralized their intake procedures during the demonstration by transferring the procedures from branches or affiliates to a central location. Conversely, a few decentralized intake. The chief motivation for centralization seems to have been to enhance service and increase efficiency in order to improve competitive position. Centralized intake was perceived as enhancing services by expanding both the hours during which intake could take place (to include evenings and weekends) and the staff's skill level (so staff were better able to refer callers to other community resources as appropriate). In addition, some agencies that had centralized intake perceived that doing so enhanced efficiency by reducing costs. Although the agencies that decentralized intake did so for a variety of reasons, most did so to increase the efficiency of their billing systems.

B. ASSESSMENT AND CARE PLANNING

Assessment and care planning set the initial pattern for the length of a home health episode and for the number of home health visits. Therefore, we expected that agencies operating under prospective payment would institute changes in care planning and assessment to reduce service use in an effort to earn profits.

1. Did Per-Episode Payment Affect Assessment and Care Planning?

Instituting changes to assessment and care planning procedures was quite common during the demonstration; more than 80 percent of the agencies we visited reported doing so. Moreover, the evidence suggests these changes were not due to per-episode payment, as comparable percentages of prospectively paid and cost-reimbursed agencies reported changing assessment and care planning procedures, regardless of cause (86 percent and 80 percent, respectively). Although a higher percentage of prospectively paid than cost-reimbursed agencies attributed the change to the

demonstration (64 percent versus 38 percent), some agencies in the prospectively paid group reported that the demonstration quality assurance (QA) instruments—not prospective payment—led them to revise their assessment procedures. The comprehensiveness of these QA instruments and their outcomes orientation led the agencies to consider issues they had not considered before the demonstration when completing patient assessments.

Moreover, prospectively paid agencies were only slightly more likely than cost-reimbursed agencies to have changed assessment and care planning procedures to increase efficiency (for example, by reducing episode lengths or the number of home health visits). About one-third of prospectively paid agencies reported changing assessment or care planning to increase efficiency, compared with about one-quarter of cost-reimbursed agencies. (Some agencies in the latter group attributed these changes to pressure to reduce visits for managed care patients or in preparation for the Interim Payment System [IPS].)

Finally, the steps prospectively paid agencies took to change their assessment and care planning procedures in order to increase efficiency were similar to those of cost-reimbursed agencies. Case Note VI.1 presents typical comments on this topic from agencies in both groups. The comments from the two groups are quite similar (although there may be differences in the degree of emphasis on efficiency that are difficult to discern).

Agencies in both groups also attributed their changes in assessment and care planning to three major environmental factors. The first factor was increased emphasis on strict enforcement of Medicare regulations—a result of ORT. The agencies changed their assessment procedures to ensure they had all the information necessary to determine whether patients were homebound and in need of skilled care, and to ensure that their documentation thoroughly covered these situations. In addition, the agencies reported revising care plans that had called for more visits than they believed could be justified under a strict interpretation of the Medicare criteria.

Managed care was a second major environmental factor motivating agencies in both groups to make changes in their assessment and care planning procedures. The agencies changed their care plans to reflect a reduction in the number of visits authorized by HMOs; some agencies reported reorienting their assessments and care plans toward patient outcomes in order to meet HMO demands for outcome-based measures of quality of care. A third major environmental factor was changes in the JCAHO requirements for assessment and outcome-oriented care planning.

2. The Adoption of Critical Pathways in Care Planning

Critical pathways have received considerable attention in home health care in recent years as a tool with the potential to improve the efficiency and quality of home health care. For purposes of the site visit interviews, critical pathways were defined as descriptions of the care to be provided under different circumstances. Most critical pathways were disease-specific, but some concerned specific tasks, such as taking medications.

We expected that prospective payment would increase the use of critical pathways, as this instrument can help identify areas in which staff have planned to provide more services than are necessary. However, we found that the use of critical pathways did not differ appreciably for

prospectively paid and cost-reimbursed agencies. Slightly more than half the prospectively paid agencies used critical pathways, compared with about 60 percent of cost-reimbursed agencies.

The use of critical pathways by demonstration agencies varied on several dimensions. First, the number of conditions (or tasks) for which agencies had adopted critical pathways varied from 2 to 60. Second, some agencies made the use of critical pathways mandatory for patients who had the applicable condition, whereas others treated the pathways as guidelines. The agencies also varied in whether they used pathways that prescribed the number of home health visits.

Some of this variation may be explained by the fact that many agencies developed their own critical pathways. They did so on the grounds that their staffs would be more likely to "buy in" to pathways if they had helped to develop them. They also developed their own pathways to avoid the expense of purchasing commercially available materials.

The agencies held differing opinions about whether critical pathways were advantageous or disadvantageous. They cited three disadvantages. First, some nurses simply did not like "so much structure" in the care process. Second, critical pathways were seen as repetitious and hard to follow, especially given that most Medicare home health patients have multiple diagnoses. For patients with multiple diagnoses, hard-copy versions of pathways require "lots of paper" and "lots of writing." Electronic versions appeared to be easier to follow and reduced the need for repetitious writing. The third, and perhaps most telling, disadvantage cited was that critical pathways were not sufficiently individualized to take into account differences in the ability of patients to learn and provide self-care, nor could the pathways take into account differences in patient compliance with treatment regimens. Commenting on the lack of individualization, one nurse described pathways as "just too vanilla." As an example of a case in which a pathway was not workable, a nurse described a 92-year-old diabetic patient with limited vision and with a wound on the bottom of his foot. The pathway assumed that the patient or an informal caregiver would be taught to care for the wound. However, no informal

caregiver was available, and the patient could neither see the wound nor reach it to change a bandage.

Three major advantages of critical pathways were cited by the agencies we visited. First, the pathways provided reminders about issues to be addressed. One nurse noted that some nurses thought very highly of critical pathways because they include checklists. The lists served to reassure the nurses that they had done everything in a visit they should have addressed. Second, critical pathways helped staff select appropriate goals or prioritize the goals. The pathways seemed to help nurses to prioritize by focusing their attention on the most critical tasks that had to be accomplished during the first few visits. The third—and most commonly cited—advantage was the ability of the pathways to promote efficiency and consistency. As the clinical supervisors and staff quoted in Case Note VI.2 suggest, gains in efficiency appeared to result from an emphasis on timing (that is, on focusing on completing tasks by a specified date), and gains in consistency were most apparent when staff substitutions were necessary (that is, substitute staff were able to readily assess a patients' point in recovery because the care plan was mapped out visit by visit).

CASE NOTE VI.2

EFFICIENCY AND CONSISTENCY GAINS RESULTING FROM
THE USE OF CRITICAL PATHWAYS

"[Pathways] do move things along faster."

"Care paths really improve consistency, teaching, and timing."

"[Pathways] help with teaching and follow through when another nurse steps in. That nurse sees that the patient had not yet learned step 3 and so [is] not ready for step 4."

Many agencies appeared to believe that the advantages of using critical pathways did not offset their disadvantages. Only slightly more than half the agencies we visited had been using critical pathways in any form—even as guidelines. (Some of the remainder kept pathways available for

reference.) Moreover, some agencies that had implemented critical pathways early in the demonstration had dropped or largely dropped them two years later. At the time of our visit, one agency that had used critical pathways quite extensively was considering resuming the use of regular notes (instead of using the critical pathway prepared forms) because of JCAHO documentation requirements, such as the requirement for documentation of patient participation in care planning. Conversely, several agencies that had not been using critical pathways at the time of our visit reported that they were considering adopting them in the future.

C. INVOLVEMENT OF INFORMAL CAREGIVERS

Patients and their informal caregivers—family members and friends—play an increasingly important role in the process of care for Medicare home health care. We expected this role to increase even further under prospective payment. The more that care was shifted to the informal caregiver, the lower the costs would be for a prospectively paid agency—and, hence, the more profit the agency could earn.

More than 70 percent of the home health agencies we visited reported changes in the level of patients' and informal caregivers' involvement in planning and in providing care. Invariably, the agencies had been attempting to increase the level of involvement.

We found little or no difference between prospectively paid and cost-reimbursed agencies with respect to the percentage of agencies reporting a change in the involvement of informal caregivers. About 75 percent of the prospectively paid agencies reported a change in informal caregivers' involvement in *planning* care, compared with slightly less than 70 percent of the cost-reimbursed agencies. More than 80 percent of prospectively paid agencies reported a change in informal caregivers' involvement in *providing* care, compared with about 75 percent of cost-reimbursed agencies.

The agencies did not cite per-episode payment as the reason for these changes. In fact, the changes we observed would have occurred in the absence of the demonstration. However, prospective payment certainly contributed to the change. Furthermore, prospectively paid agencies were more likely than cost-reimbursed agencies to attribute the change in informal caregiver involvement at least partly to the demonstration (about 50 percent and less than 20 percent, respectively). The comparable figures for informal caregiver involvement in providing care were about 70 and 15 percent, respectively.

In addition, prospectively paid and cost-reimbursed agencies reported that different aspects of the demonstration motivated them to change the level of informal caregiver involvement. Cost-reimbursed agencies indicated that data elements in the demonstration QA instrumentation led them to focus more attention on self-care and family care. In contrast, prospectively paid agencies indicated that efforts to reduce lengths of stay or the number of visits motivated increases in the involvement of informal caregivers in planning or in providing care—as is illustrated by the quotations in Case Note VI.3. This difference in motivation, along with the evidence that length of stay did decrease substantially more for the prospectively paid agencies (Trenholm 2000; and Archibald and Cheh 2001), suggests that prospective payment provided the incentive to involve caregivers to a greater degree for these agencies than for cost-reimbursed agencies; if the environment had not changed so dramatically, we might have observed that it was due to prospective payment. However, because the environmental factors pushed treatment and control agencies to make the same changes in the process of care, it is difficult to detect any effects of PPS.

So, what environmental factors induced the agencies to increase the involvement of informal caregivers in planning and in providing care? The increased penetration of managed care plans and attendant reductions in the number of visits authorized was one factor. Noting that managed care organizations expect informal caregivers to provide substantial help, one informant remarked, "HMOs want the significant other to flush the IV line. That used to be a nursing task, but not anymore." The agencies observed that the practices adopted for patients enrolled in managed care organizations "bleed over" into practices for Medicare fee-for-service patients. For example, after nurses realized that managed care patients' caregivers could perform certain tasks, they found it easy to ask the caregivers of their fee-for-service patients to do the same. Another major environmental factor cited as leading to changes in the involvement of informal caregivers was the need to "get ready for IPS and the national prospective payment system."

Yet another environment factor was the increased emphasis on strict enforcement of the Medicare regulations. To see how strict enforcement might affect informal caregivers, consider the statement of one therapist:

> In the past, we aimed to make people independent in the community. We wanted them to be able to go to the grocery store. Now, we aim to make them walk 100 feet. When they can do that, they are no longer homebound, and we're done.

Several agencies noted that they involved families more because state surveyors were placing greater emphasis on family involvement in planning. Historically, some agencies had been thought to design care plans to meet their own needs, rather than the families' needs. Thus, many state policymakers view involvement of the family as a way to improve the quality of care.

Finally, some agencies did not pinpoint a specific factor behind the increased involvement of informal caregivers. Rather, they cited a "general trend" or "change in philosophy" for Medicare home health care. For example, one informant noted:

> There is a national trend to decrease care by all agencies. People do not expect the "blanket of care" that was provided formerly.

D. USE OF PORTABLE COMPUTERS BY CLINICIANS

One interesting question is whether prospective payment affected the use of portable computers by clinicians. Portable computers offered prospectively paid agencies numerous potential advantages (for example, streamlining paperwork and making patient data more easily accessable for analysis). However, they also required an up-front investment of resources, which the agencies operating under a three-year demonstration might have considered too risky, given that they would then have to change to an unknown payment system. Thus, we were uncertain whether the prospectively paid agencies would be more likely than cost-reimbursed agencies to invest in portable computers.

We found that the demonstration agencies rarely used portable computers, and that prospectively paid agencies did not adopt them more readily. A sizeable minority of demonstration

agencies (about one-quarter) used these computers during the demonstration period, but there was essentially no difference in the percentages of prospectively paid agencies and cost-reimbursed agencies using them at the time of our visits (24 percent and 20 percent, respectively).

The agencies cited two reasons for using portable computers: (1) to improve efficiency and reduce costs; and (2) to improve the quality of care. However, the agencies that used the computers did not know whether their visiting staff became more efficient as a result. Although a few reported small gains in productivity—or at least no losses in this area—some were still struggling to reach their established productivity standards even after several months of experience. Staff resistance to using computers, especially among older staff, was a key reason why productivity decreased. One agency noted that some visiting staff took notes during the home visit and inputted them later. This approach seems highly unlikely to have increased the productivity of the staff involved.

Regardless of the effects of portable computers on the productivity of visiting staff, most of the agencies we visited that had adopted them reported gains in management efficiency (see Case Note VI.4). Portable computers almost completely eliminated the need to enter data to produce admission documents, such as HCFA form 485. Some agencies reported that portable computers reduced the number of days required to complete admission paperwork, sometimes dramatically. The agencies also reported management efficiency gains because supervisors and managers had ready access to chart data. For example, an automated medical record enabled supervisors to look up information in a chart in response to a physician's request without having to contact the nurse. Similarly, QA staff were able to find information more quickly, and reports for management were produced much more easily. Thus, portable computers substantially increased the efficiency of agency administration, even if they had no such positive impact on visiting staff.

Some agencies reported that giving clinicians portable computers improved the quality of both documentation and care. Documentation improved because the computer's logic required that critical items be completed before the software would advance to the next item. Care improved because the computer program provided memory aids that helped to ensure thoroughness. Moreover, especially in agencies based in hospitals or affiliated with health care networks, including hospitals, clinicians' access to portable computers provided timely access to hospital records. As a result, nurses had better information during patient assessments on their patients' clinical histories.

The agencies that did not use portable computers cited a variety of reasons for not doing so (see Case Note VI.5). Many agencies commented that they wanted to give clinicians portable computers, but could not afford to do so. The expense was an issue for small, freestanding agencies and for very large agencies. The expense was less of an issue for agencies that were members of chains or were based in hospitals and thus were potentially able to tap the resources of a parent organization. In

addition to the expense of hardware and software, agencies mentioned the expense of training staff to use the computers. Some agencies chose not to adopt portable computers because they were waiting until the "bugs" had been eliminated from the systems or until lightweight equipment became available, or because their staff disliked computers. Some agency staff may have disliked computers in part because of the "canned" charts the computers produced and in part because they believed the use of computers would depersonalize their interactions with patients. One agency reported that, although some patients appreciated the fact that the nurse had instant access to their medical records, others complained, "The nurse spends more time with her machine than with me."

CASE NOTE VI.5

REASONS FOR REJECTING PORTABLE COMPUTERS FOR VISITING CLINICAL STAFF

"We are a small agency and moving to a 'paperless system' would be too expensive."

The agency wants to go to hand helds, but doesn't have them yet. It estimates it will cost $1 million for the entire staff to have them.

It chose not to use laptops for clinicians because costs for training, hardware, software, and replacement are too high. Training is a major effort. Equipment is heavy (on top of supplies that nurses carry), and there is a danger of back injury. They will wait for cheaper and smaller equipment.

It implemented portable computers in a sister agency, and it was a "disaster." It decided to hold off for a year or two, until it worked the "bugs" out.

E. DISCHARGE PLANNING

Agencies had an incentive under prospective payment to reduce the use of services. Because they could reduce service use by reducing the length of the home health episode, and because instituting changes in discharge planning practices was one way to achieve reductions in service, we expected prospectively paid agencies to make these changes. However, we found that almost all the

agencies were changing the way they conducted discharge planning. Indeed, more than 85 percent of the agencies we visited reporting changing their discharge planning procedures.

Although the evidence suggests that the agencies probably would have changed their discharge planning procedures in the absence of the demonstration, prospective payment contributed to these efforts. Prospectively paid agencies were somewhat more likely than cost-reimbursed agencies to report that they changed their discharge planning practices (94 percent versus 79 percent, respectively).

Most prospectively paid agencies attributed their actions to the new payment system. The cost-reimbursed agencies and the remaining prospectively paid agencies cited a variety of other factors. Although a few cost-reimbursed agencies attributed the change in discharge planning to demonstration QA data items that raised their awareness about long-term patient needs, the majority of agencies in the control group cited one or more of the same environmental factors that had been affecting other care practices. These factors included (1) reductions in the number of visits authorized for managed care enrollees; (2) more stringent interpretation of the Medicare regulations, which resulted in earlier discharge and referral to outpatient care for additional rehabilitation; (3) shifts in JCAHO and state survey requirements to outcome-oriented care; and (4) preparation for IPS and a national prospective payment system. The last factor was the one most commonly reported.

Prospectively paid agencies and cost-reimbursed agencies implemented fairly similar changes in their discharge planning procedures. In both groups of agencies, the most common change involved an emphasis on initiating discharge planning early in the home health episode, in part by clearly informing patients and their families that Medicare home health care would be a short-term service. Case Note VI.6 presents typical agency comments about the way that discharge planning changed during the demonstration.

F. REFERRALS TO COMMUNITY SERVICES

As the length of home health episodes and the number of visits are reduced, agencies may substitute home- and community-based services for Medicare home health care. Because we expected prospectively paid agencies to reduce their services more than cost-reimbursed agencies, we also expected them to refer more often to home- and community-based services. (For brevity, we use the term "community services," rather than "home- and community-based services" in the remainder of this report.)

Slightly less than 70 percent of the agencies we visited reported making a change in their referrals to community services during the demonstration. Almost without exception, they reported increasing referrals or referring earlier in the home health episode—most commonly to personal care or to attendant or homemaker programs. A few agencies increased referrals to adult protective services. Some agencies also mentioned referrals to a peer support group, pharmacy prefill program, case management program with telephone reminders for medical appointments, and state programs

that assess the need for community services.[1] In order to increase referrals to community services, agencies reported both more use of medical social workers (MSWs) and referrals to MSWs earlier in the home health episode.

As with discharge planning, we found that prospective payment may have been a factor explaining why the agencies increased referrals to community-based programs; however, environmental changes would have led the agencies to make these changes in the absence of the demonstration. A somewhat larger percentage of prospectively paid agencies than cost-reimbursed agencies reported making such a change (76 percent and 59 percent, respectively). Moreover, prospectively paid agencies were much more likely than cost-reimbursed agencies to attribute a change in referrals to the demonstration (68 percent and 14 percent, respectively).

Cost-reimbursed agencies cited a variety of environmental factors as leading to an increase in referrals to community services. Among the factors cited were the shift in the philosophy of Medicare home health care, preparation for changes in the national Medicare home health program, reductions in the number of home health visits authorized for managed care enrollees, and increased patient need due to reduced lengths of hospital stay. These agencies also noted that the demonstration QA instrumentation "points to" the need for community services, such as medication prefills. Prospectively paid agencies cited the incentives of the payment system to discharge earlier, as well as these environmental factors.

In a previous report, we found that prospective payment had no effect on the use of community services (Phillips 2000). The evidence in this report is fairly consistent with that finding; the prospectively-paid agencies were just slightly more likely to refer to these organizations.

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[1] A pharmacy prefill program is one that fills a patient's medication box with all the patient's medications at the appropriate times.

Furthermore, we may not have observed any differences in community service use because the supply of community services was inadequate: a number of agencies cited constraints on the supply of community services that made it difficult to place patients. They mentioned the fact that community agencies were applying more stringent admission criteria for community services, community agencies had longer waiting lists, and community agencies were "running out" of resources early in their fiscal years and had therefore ceased providing services for periods of time. Thus, even though the prospectively paid agencies might have attempted to move patients into community services earlier and somewhat more often, we might have failed to observe increased use because the services simply were unavailable.

G. CONCLUSIONS

During the demonstration, change was the rule rather than the exception in all the components of the process of care that we examined, from intake, to assessment and care planning, to involvement of informal caregivers, to discharge planning, to referral to community services. For every component of the process of care, a minimum of about 70 percent of the agencies reported making a change. Furthermore, at least 80 percent reported making changes to their assessment and care planning and discharge planning practices. The extent of this change is perhaps not surprising given the sweeping changes in the industry that affected both prospectively paid and cost-reimbursed agencies.

Did per-episode prospective payment cause these changes? For most components of the process of care, we found at least moderately large differences in the percentages of prospectively paid agencies and cost-reimbursed agencies *attributing* change to the demonstration. For two components of the process of care—discharge planning and referrals to community services—the differences were quite large. However, roughly comparable percentages of prospectively paid and

cost-reimbursed agencies reported changing intake procedures, assessment and care planning procedures, and the involvement of informal caregivers in planning and providing care. The percentages of prospectively paid agencies reporting changes in discharge planning and in referral to community services were moderately larger than the corresponding percentages for cost-reimbursed agencies. The types of changes that the agencies made were similar, however.

Hence, from a classical evaluation perspective, one would conclude that prospective payment had no effect on the process of care. That is, even if these agencies had not been paid prospectively, they probably still would have made the changes in response to the environmental factors that were driving all agencies to act in similar ways. In the absence of the environmental factors, would the prospectively paid agencies have made the changes? We cannot address this question in a purely scientific sense. Nevertheless, the evidence suggests that the agencies *believed* they would have done so.

Furthermore, the impact analyses found that the prospectively paid agencies reduced services and shortened episodes more than did the control agencies, and that they made these changes earlier in the demonstration—before some of the environmental changes took effect (Trenholm 2000; and Archibald and Cheh 2001). This finding suggests that prospective payment certainly contributed to the changes in care processes we observed—especially for the practices of discharge planning and referral to community services.

VII. HOW AGENCIES TRIED TO HOLD DOWN COSTS

The demonstration offered the agencies two ways to earn profits. As discussed in detail in Chapter V, they could earn profits by reducing their visits per episode. They also could earn profits by lowering their cost per visit. An agency that successfully lowered its per-visit cost could earn profits under the episode payment method and on its outlier visits. Thus, all else equal, we expected that prospectively paid agencies would take steps to reduce their per-visit costs.

Agencies could target two types of costs for reductions: (1) overhead or fixed costs, and (2) variable costs. Overhead costs are costs that do not vary with an agency's volume of services (for example, the rental cost of office space). Variable costs are costs that do vary with the agency's volume (for example, the cost of the time a nurse spends making a visit). The agency's cost per visit is the sum of the fixed cost per visit and the variable cost per visit.

The agencies' efforts to reduce the number of visits per episode were quite successful; the number (volume) of visits per episode fell by nearly 17 percent. However, reducing volume per episode entailed financial risks. If an agency was unable to increase the number of patients to compensate for the reduction in visits per episode, then its overall volume of services would decline. As volume declined, so, too, would the agency's variable costs. However, the agency's overhead costs or fixed costs would remain the same, at least in the short term. Thus, the fixed cost per visit would *increase*, and the agency's cost per visit would rise. Agencies that were able to reduce visits per episode therefore had to monitor their overall volume and, possibly, reduce their overhead costs in order to ensure that volume reduction strategies would be profitable.

The alternative way to earn profits was to reduce the cost per visit, but this alternative was less popular at the beginning of the demonstration than was reducing visits. At that time, only half the

prospectively paid agencies—about the same proportion as in the control group—reported plans to implement strategies to reduce per-visit costs (Phillips and Thompson 1997). However, our impact analysis found that the prospective payment system (PPS) substantially *increased* the cost per visit; for example, the cost of a skilled nursing visit rose an average of 10 percent more for prospectively paid agencies than for cost-reimbursement agencies (Cheh and Black 2001). The relatively larger increase was partly explained by a larger decrease in agency visit volume. As shown in Figure VII.1, from the base year to the end of year 3, total volume declined 42 percent for prospectively paid agencies and 32 percent for cost-reimbursed agencies. The larger reduction in visit volume accounted for part of the larger cost increase that the prospectively paid agencies experienced. For example, it accounted for 21 percent of the impact on skilled nursing visit costs (Cheh and Black 2001). Furthermore, the more an agency reduced its visits per episode, the greater the increase in the cost per visit, suggesting that the increase in cost per visit was related to the agencies' efforts to reduce the number of visits.

In this chapter, we address three questions to explain why the prospectively paid agencies had higher costs per visit:

1. Did the prospectively paid agencies try to reduce their per-visit costs during the demonstration? Or, did they continue to focus on service reduction, which may explain why their cost per visit rose?

2. If the prospectively paid agencies did try to reduce their per-visit costs, what types of strategies did they use? Were their strategies different from the ones the control agencies used?

3. What factors limited the ability of the agencies to effectively control their cost per visit, and did they differ for prospectively paid agencies and control agencies?

We found that virtually all the agencies implemented strategies to control their costs during the demonstration. Furthermore, prospectively paid agencies were as likely as cost-reimbursed agencies

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to do so; indeed, they may have tried harder to do so. However, because there is a trade-off between reducing costs per visit and reducing visits per episode, the agencies providing home health care under prospective payment had higher costs per visit.

A. WHAT DID AGENCIES DO TO REDUCE COSTS?

Overall, virtually every agency in the demonstration (95 percent) implemented at least one strategy to reduce its costs during the demonstration. Prospectively paid agencies were just as likely to implement a cost-reduction strategy as were control agencies; furthermore, on average, they implemented nearly the same number of strategies (3.3 strategies, versus 3 strategies by cost-reimbursed agencies). Agencies in both groups believed their strategies reduced costs (although not necessarily cost per visit, as we explain later). Thus, even though only half the agencies had planned at the start of the demonstration to reduce costs, almost all actually did so in response to significant changes occurring in the health care environment.

Despite adopting cost-reduction as a goal, few agencies had tried to calculate whether cost reductions would actually lower their per-visit costs. In part, it was extremely difficult to predict volume during the atypical demonstration period (with overall volume falling); in part, the agencies' managements focused on the aspects of their business they could control (costs), rather than on what they could control only incompletely (cost per visit).

Because volume was declining during the demonstration, it is not surprising that the two most frequently used cost-reduction strategies were targeted to reduce fixed (overhead) costs.[1] By far, the most frequently used strategy was to reduce administrative staff hours; 68 percent of the agencies implemented this strategy (Table VII.1). The next most frequently used strategy, consolidating

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[1]The agencies cited 31 different cost-reduction strategies, many of which were unique to specific situations.

FIGURE VII.1

CHANGES IN AVERAGE TOTAL VISIT VOLUME

Number of Visits per Agency
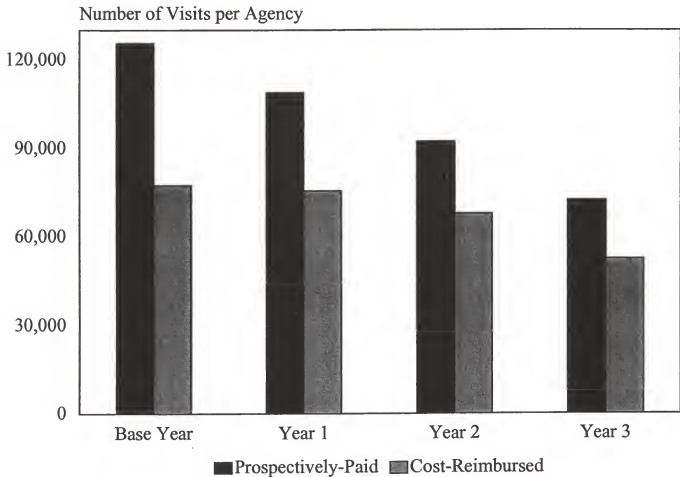
Source: Medicare Cost Reports. Only includes agencies with all four years of data.

TABLE VII.1

COMPARISONS OF COST-REDUCTION STRATEGIES USED BY
PROSPECTIVELY PAID AND COST-REIMBURSED AGENCIES
(In Percents)

	Prospectively Paid	Cost-Reimbursed
Strategies to Reduce Fixed Costs		
Reduced administrative costs by reducing hours worked or reducing staff size	67	69
Consolidated office space	38	21
Paid visiting staff on a per-diem, per-visit, or per-hour basis, instead of a salary	17	21
Strategies to Reduce Fixed and Variable Costs		
Invested in new technology (portable computers and management information systems)	35	21
Reduced benefits	26	21
Strategies to Reduce Variable Costs		
Increased visiting staff productivity standards or enforced standards	21	31
Instituted new supply procedures	21	17

SOURCE: Case study data (N = 63; 34 prospectively paid agencies and 29 cost-reimbursed agencies).

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office space, was also aimed at reducing fixed costs. Thirty-percent of the agencies moved to small quarters or implemented another strategy to consolidate space and reduce space-related costs.

Of the remaining five strategies that were implemented relatively frequently (by 19 percent or more of the agencies), three strategies were aimed at reducing the variable costs associated with a visit. These strategies included increasing or enforcing visiting staff productivity standards; instituting new patient supply procedures; and paying staff on a per-visit or per-hour basis, rather than paying them a salary. The final two strategies—using new technology and reducing staff benefits—reduced both overhead costs and variable costs.

1. Strategies to Reduce Overhead Costs

The majority of the agencies implemented the most frequently used strategy—reducing administrative staff—by both laying off staff and leaving those positions unfilled. Seventy-nine percent of the agencies that reduced administrative staff to save costs (34 of the 43 agencies) laid off at least one administrative staff member. In addition, some agencies used staff attrition as the sole means to reduce staff size. An agency would reassign the responsibilities of employees who left to other staff members, rather than replace the employees with new hires. In a small agency, in which none of the staff was planning to leave, all administrative staff reduced their hours to part-time status to avoid layoffs. Staff members of all levels were downsized in this process, as illustrated in Case Note VII.1; however, although the savings in fixed costs from these strategies were unambiguous, they were not enough to offset the reduction in volume or to reduce the cost per visit.

As the number of administrative staff members was reduced, agencies found they had more office space than they required. Thus, they were able to save costs further by consolidating their office space, in most cases, by closing branch offices. Other agencies consolidated staff within their present space and sublet the unused space or ended their leases and moved to smaller, less expensive office space. All the agencies that consolidated office space agreed that the strategy effectively reduced their fixed costs.

To varying degrees, some agencies implemented a strategy of transforming a fixed cost into a variable cost. By doing so, they increased the number of costs that automatically rose and fell with changes in volume. To implement this strategy, some agencies changed the way they paid their visiting staff. Rather than pay these staff a salary (with payment for a full week's work regardless of the number of services rendered), they offered a per-diem rate (payment only for the days actually worked), an hourly rate (payment for hours worked), or a per-visit rate (payment for visits made). Under this strategy, staff payment varied completely with the volume of work. Other agencies altered their mix of staff payment methods, so that they employed a lower proportion of full-time,

salaried staff and a higher proportion of per-diem, per-hour, or per-visit staff. Under this strategy, some costs remained fixed, but rather than change the payment basis for current staff members, an agency would either hire more staff on a variable-payment basis or lay off salaried staff. By using either one of these approaches, agencies avoided having to pay staff salaries when they had less than a full schedule of home health visits for all their staff; in this way, the agencies were able to reduce their total cost. All but one of the agencies that used one of these approaches found them to be effective cost-reduction strategies.

Finally, the agencies implemented two strategies to reduce overhead and variable costs. In the first case, they adopted new technologies (portable computers and new office computer systems) to save staff time. Computers can reduce variable costs by reducing the amount of time required by a visiting staff member to process paperwork, and they can reduce overhead by reducing the time required to complete administrative tasks. For example, one agency bought hand-held computers for nurses to directly enter a patient's information at admission (in an effort to save the nurse time in completing paperwork); this information was downloaded directly to the agency's billing system (saving the cost of a data entry clerk.) Unlike the previous three strategies, however, these technological improvements did not always reduce the agencies' costs. In some cases, the cost of the new technology offset the savings, especially when the agency staff resisted the using the technology.

The second strategy that reduced both administrative and variable costs was to reduce benefits (retirement, health insurance, and overtime pay). Some agencies made only relatively minor cuts in benefits (and hoped that their staffs would not notice); others reduced benefits substantially (see Case Note VII.2). In all cases, the agencies believed that this strategy saved money.

2. Strategies to Reduce Variable Costs

Because decreases in volume have no effect on variable costs per visit, the agencies felt less pressure to reduce these costs. Nevertheless, reducing variable costs would have helped the agencies remain under the cost caps or, if they were in treatment group, earn higher profits. Some agencies did implement strategies to reduce variable costs, but more agencies focused on reducing their overhead costs.

During the demonstration, slightly more than 25 percent of the agencies instituted higher productivity standards for visiting staff or chose to enforce standards they previously had enforced laxly. Requiring staff to increase the number of visits per day effectively reduced the staff time per visit and, thus, the per-visit cost (in agencies that paid their staffs salaries). One agency felt that this strategy did not actually reduce costs, as almost all its staff already had been working at the higher productivity rate. However, the new productivity standards reduced costs for the remaining agencies, either by "weeding out" weak staff that were unable to meet the higher standards or by requiring staff to work more efficiently during the day (see Case Note VII.3).

The final strategy that many agencies implemented to reduce variable costs was to introduce new patient supply procedures; 19 percent of the agencies used these procedures with varying degrees of success. The agencies that reported the greatest reductions in their patient supply costs achieved these reductions by better classifying nonroutine supplies (Case Note VII.4). Routine supply costs are included in per-visit costs, whereas nonroutine supplies are billed separately. Historically, agencies have had difficulty separating these costs; under the new cost pressures, they made greater efforts to make this distinction. Thus, although total supply costs did not fall, the costs that were included in the agencies' per-visit rate were reduced. Agencies that focused on ways to reduce total supply costs (six percent of all agencies) usually found that their efforts were ineffective.

CASE NOTE VII.4

HOW AGENCIES REDUCED THEIR SUPPLY COSTS

"We switched from using 'Cadillac' quality supplies to just adequate-quality supplies. They are much less expensive."

"We instituted a new machine that automatically bills nonroutine supplies to the individual patient. This has reduced our costs because we had a lot of nonroutine supplies that were billed as routine supplies, so they were incorporated in our per-visit cost. In addition, knowing that they are being monitored, nurses are less likely to take large amounts of routine supplies that are left in the home after the patient is discharged."

"We started having all nonroutine supplies delivered directly to the patient's home. This way, they can't be included in our cost per visit."

B. DID THE TREATMENT AGENCIES USE DIFFERENT STRATEGIES TO CONTROL COSTS?

We know that the cost per visit rose substantially more for prospectively paid agencies than for control agencies, so the natural question is: did the prospectively paid agencies use different strategies to control costs? If they had, the difference might explain why their cost per visit rose significantly more.

When we compared the cost-reduction strategies implemented by the two groups of agencies, we found the largest difference to be in the handling of office space. Prospectively paid agencies were more likely than control agencies to have consolidated their office space (38 percent versus 20 percent; Table VII.1). This finding suggests that prospectively paid agencies may have been more aggressive in reducing staff, and indeed, prospectively paid agencies were more likely to have laid staff off during the demonstration (65 percent, compared with 41 percent of cost-reimbursed agencies). Because the volume of services fell more for the prospectively paid agencies, it is not surprising that they took more aggressive steps to reduce staff size in order to control costs.

Prospectively paid agencies and cost-reimbursed agencies implemented most of the other strategies at nearly the same rate. Both groups reduced benefits, increased productivity standards, instituted new supply procedures, and reduced full-time salaried staff in favor of variable rate staff at about the same rate. Prospectively paid agencies were more likely to use new computer technology (35 percent, compared with 21 percent of cost-reimbursed agencies). However, different data are useful under prospective payment than under cost-reimbursement. Thus, it is likely that these agencies used technology for reasons other than cost containment, (such as to review service utilization patterns to identify high-use staff), possibly explaining its more frequent use. We therefore conclude that prospectively paid agencies were as aggressive as cost-reimbursed agencies in implementing strategies to reduce costs. We must look elsewhere to explain why the cost per visit rose significantly more for the prospectively paid agencies.

C. WHAT FACTORS INHIBITED AN AGENCY'S ABILITY TO CONTROL COSTS?

All the agencies used the same strategies to reduce costs, yet we know that the cost per visit rose more for prospectively paid agencies. This information leads us to hypothesize that some factors prohibited the agencies from effectively implementing the strategies, and that these factors were a larger impediment for prospectively paid agencies.

When asked about the factors that made it difficult to control their cost per visit, the declining volume of care was the factor cited by the greatest number of agencies (see Case Note VII.5). After years of growth, overall volume declined during the demonstration period; many agencies experienced substantial decreases in the volume of services for the first time. The decrease in volume put upward pressure on the fixed portion of per-visit costs, thereby increasing the cost per visit. The decrease in volume explains why many agencies believed they never knew whether their strategies to reduce costs actually reduced their per-visit costs. They knew that their costs were

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CASE NOTE VII.5

HOW VOLUME AFFECTS THE COST PER VISIT

"The key to keeping our costs down is having a large volume base. We are concerned that our cost per visit is going to go through the roof this year because we lost our referrals from our primary hospital referral source."

"The decline in volume just hit us out of the blue. Nine months ago we predicted a nine percent decline in volume. Instead, we went from 104,000 visits per year to 75,000 visits—and our cost per [skilled nursing visits] visit rose from $52 to $75."

"Our case load dropped 33 percent—seemingly overnight. We cut staff, but we just couldn't cut them fast enough."

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lower in a particular area (for example, staffing or space costs), but their constantly changing volume prevented them from determining whether they had reduced costs enough to reduce their cost per visit.

As a result of declining volume, the agencies had to reduce their staffs in order to reduce or maintain their cost per visit. This action led to the second impediment to reducing costs—the agencies' desire to avoid staff layoffs, which disrupted their operations and affected staff morale. Layoffs can be highly costly in terms of lost productivity, and most agencies were willing to live with higher per-visit costs in the short run if they believed they would be able to take other steps in the future to reduce these costs.

The third factor inhibiting cost reduction was the ever-increasing burden of government regulation. Agencies pointed to the QA system (implemented as part of the demonstration) as a example of a regulation that required a very costly process to implement and maintain. One small agency observed that it had to hire a full-time data entry clerk solely to deal with the QA data; the data entry clerk's time was in addition to the time the agency's staff spent completing the QA forms. This staff time increased both the variable cost per visit and the fixed cost per visit.

Finally, a few agencies cited the robust economy and unions as impediments to controlling costs. They believed that, because of the robust economy, they had to face high rents and high salaries, especially for office staff that could obtain employment in a variety of industries. The higher salaries put upward pressure on the agencies' fixed cost per visit. Unionized agencies indicated that the unions made it very difficult for them to implement two effective strategies to reduce costs—reducing staff and negotiating changes in benefits. Thus, unions were putting upward pressure on both variable and fixed costs. However, the agencies also acknowledged that the unions were much easier to deal with than in the past, because the unions knew there was little the agencies could do in light of changes mandated by the Balanced Budget Act of 1997.

All these factors explain why it was difficult to control cost increases, but only the decrease in the volume of care explains why cost per visit rose more for prospectively paid agencies than for cost-reimbursed agencies. As we noted, however, this decrease accounts only for part of the increase in cost per visit. What explains the rest?

The evidence suggests the existence of a trade-off between reducing costs and reducing visits. As one agency noted, "After working at this system for three years, we now think it is impossible to lower the per-visit costs. The things that we can do that are effective for decreasing the visits per episode just increase the cost per visit."

To begin this discussion, consider the cost-reduction strategy to lower per-visit costs by increasing productivity standards. Roughly equal numbers of treatment agencies and control agencies adopted this strategy. However, a few treatment agencies (eight percent) told us that they actually reduced their productivity standards during the demonstration, whereas none of the controls

did so.[2] According to these agencies, the shorter episodes forced nurses to conduct more education during a visit, and more care coordination during their time outside the home. Because the agencies wanted the nurse to do more over a shorter period, they also felt they had to lower the number of visits per day a nurse was required to make.

The second cost-reduction strategy—to reduce the number of nurses paid a salary—was also cited as being in conflict with the goal of reducing visits. A few treatment agencies noted that they considered switching their payment method during the demonstration from a salary basis to a per-visit basis (or to include a higher proportion of staff in the per-visit category). However, they chose not to make this change because they felt that it sent staff the wrong signal (Case Note VII.6). Furthermore, we found no clear difference in the way agencies paid their staffs; both treatment agencies and control agencies tried to increase the proportion of staff paid on a per-visit basis, but a few agencies in each group switched from paying staff on a per-visit basis to hiring staff for full-time salaried positions.

Why did agencies have more salaried positions if it is less expensive to pay per visit? As we have discussed in Chapter V, treatment agencies were moving staff to salaried positions in order to help reduce the number of visits per episode. Cost-reimbursed agencies provided two other reasons for making this change. First, because the volume of services had dropped so much, agencies that had both salaried staff and per-visit staff had assigned the visits to their salaried staff first to maintain productivity. Because the per-visit nurses received less work than they would have liked, they chose to leave. The agencies preferred this solution to the alternative of having to lay off their full-time

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[2]At the end of the demonstration, the average productivity standard for nurses was virtually the same—5.7 visits per day for treatment agencies and 5.8 visits per day for control agencies.

CASE NOTE VII.6

OPINIONS ABOUT PAYING AGENCY STAFF ON A PER-VISIT BASIS

"I just don't get why anyone would consider paying staff per visit under an episode payment system. Paying staff per visit gives them the incentive to make more visits, and we don't want staff to make more visits."

"It seemed to us that paying staff on a per-visit basis would give the nurse the incentive to make more visits. Why make the telephone call to the patient and not get paid any extra when instead you can make a visit and get paid for it?"

"We have thought about this a great deal and still don't have a good answer. We want to have most of our staff paid on a salary basis so that they don't have the incentive to give more visits. But we need to have the flexibility of staff who are paid per visit, especially when the overall volume of visits declines and fluctuates as much as it does. So we have been moving towards having more staff paid on a per-visit basis to give us flexibility. But we want to maintain our salaried staff, too."

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staff.[3] Second, two cost-reimbursed agencies had the opportunity to hire contract staff into full-time positions at salaried rates that were lower than the contracted rates. Taking advantage of this opportunity enabled the agencies to save costs as a result of switching from paying per visit to paying a salary.

Thus, we observed frequently used cost-reduction strategies that seemed to conflict with the goal of lowering visits per episode. We also found that commonly used service-reducing strategies could increase per-visit costs. To start, agencies tried to reduce visits by using more specialized, highly trained caregivers, especially nurses specializing in wound care. Not only do these providers command higher salaries on a per-hour (or per-visit) basis, but some agencies gave specialized nurses lower productivity standards than they gave a typical nurse. As a result, the cost per visit increased, even though the strategy reduced the number of visits per episode (see Case Note VII.7).

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[3]This pattern also occurred at the treatment agencies.

CASE NOTE VII.7

OPINIONS ABOUT MORE EXPERIENCED OR SPECIALIZED STAFF AND PRODUCTS

"In today's environment, you need a very experienced nurse. The nurse is trying to do a lot in a short period of time, and that requires good management skills. You have to pay for those management skills, but it's worth it. Otherwise, you won't reduce the number of visits."

"We have hired an ET nurse [wound care specialist] to help reduce the number of visits. But an ET nurse has more training, so you have to pay [him or her] more."

"We considered adopting a new set of wound care supplies, and I'm convinced these supplies can heal wounds faster. But the cost of the supplies was very high, and we knew it would kill us on our per-visit cost. So we didn't do it."

Finally two agencies (three percent) noted that increasing the use of specialized supplies increased costs, and one agency observed that using telephone followups in lieu of visits added to the per-visit cost. The first two agencies pointed to the use of advanced wound care products as the source of the trade-off between increasing supply costs and reducing visits; the new products cost more but could heal a wound faster and in fewer visits. The third agency commented, "If you call instead of making of visit, you have to pay for the time to make that call. Since the number of visits doesn't change, it just makes sense that the cost per visit is increasing."

Thus, we identified both cost-reducing strategies and visit-reducing strategies that worked at cross-purposes. The cost-reducing strategies that worked at cross purposes were (1) increasing productivity standards, and (2) paying on a per-visit basis. We also identified four utilization-decreasing strategies that worked at cross purposes: (1) supervising staff more closely, (2) hiring staff with advanced credentials, (3) increasing the use of specialized supplies, and (4) relying on telephone calls for patient followup. Given these conflicting strategies, it follows that the prospectively-paid agencies, who were trying to reduce visits as well as costs, found that their cost increased more.

Perhaps the most important finding is that few agencies recognized the explicit trade-off they faced between reducing the cost per visit and reducing visits per episode. The agencies failed to recognize that, to maintain their cost per visit, they had to increase referrals or reduce overhead costs as they reduced their visits per episode. Furthermore, they failed to recognize the trade-off inherent in many strategies.

Why did so many agencies fail to recognize this important issue? A number of factors probably contributed to this situation. First, many agencies lack sophisticated management information systems. In fact, as we have noted previously, almost half of the prospectively paid agencies were unable to determine how many episodes they had provided because PGBA did not track this measure for them. Without this information, the agencies would have had difficulty understanding the new cost issues. In addition, the environmental changes clearly were distractions, as managers who had never operated in an environment other than one of continued growth were forced to confront new challenges. These managers were unlikely to have had the opportunity to analyze their cost data as much as they would have liked, especially as many were laying off financial operations staff. Finally, however, many agencies had little financial savvy. Operating an agency in a cost-reimbursed world requires less financial risk than most industries experience. Thus, most managers could draw on only limited experience when conducting financial analyses.

D. CONCLUSION

We found that virtually every agency in the demonstration used strategies to reduce its costs. For the most part, these strategies were designed to reduce fixed costs, as the rapid decline in volume forced overhead costs per visit upward. Both prospectively paid agencies and cost-reimbursed agencies used the same strategies to reduce costs; if there were any differences, prospectively paid agencies may have tried to reduce costs more aggressively.

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However, two factors prevented the treatment agencies from controlling their cost per visit as successfully as the control agencies were able to. First, visit volume fell more at the prospectively paid agencies. Because cost per visit is the sum of the variable cost per visit and the fixed cost per visit, the decrease in volume increased the fixed cost per visit, forcing the cost per visit upward. Second, some strategies that reduced the number of visits per episode also increased the cost per visit, and strategies that reduced the cost per visit made it difficult to reduce visits per episode. Treatment agencies were more effective at reducing volume, so it follows that their cost per visit would increase more. However, few agencies in the demonstration recognized this trade-off.

VIII. CONCLUSIONS

This report had three goals. First, we wanted to understand whether issues that arose during implementation of the demonstration affected our interpretation of the demonstration impacts. To meet this goal, we described how the agencies implemented specific demonstration features and the environment in which they operated. Second, we wanted to understand two key results from our previous impact analyses—how prospectively paid agencies reduced their visits per episode so sharply, and why their per-visit costs increased. To meet this goal, we described the strategies that agencies used to lower costs and utilization, as well as the factors that inhibited their ability to do so effectively. Third, we wanted to understand how the agencies changed their business models and care practices in response to the new payment system. Our purpose was to use this understanding to envision changes likely to occur under the national prospective payment system (PPS). We accomplished this goal by comparing the changes that the prospectively paid and cost reimbursed agencies made in their business models and care plans.

A. DID IMPLEMENTATION ISSUES OR THE ENVIRONMENT AFFECT OUR INTERPRETATION OF THE DEMONSTRATION RESULTS?

We reviewed three key demonstration features that differed substantially from the cost-reimbursed system that could have affected the demonstration results: (1) medical review procedures, (2) financial procedures, and (3) the quality assurance (QA) system. If these systems failed to operate as intended, demonstration agencies may have focused their efforts on resolving operational problems, rather than on responding to the demonstration incentives.

We found no evidence that the medical review procedure was implemented in a way that affected the demonstration results. During the early months of the demonstration, the requirement

that every case be reviewed caused major procedural problems for Palmetto Government Benefits Administrator (PGBA), which was unable to process all the cases, and major financial problems for the agencies, which had no cash flow because their payments were delayed by the medical review. The combination of the decision to decrease the medical review requirement to 25 percent of the cases and the introduction of bimonthly interim payments to smooth the agencies' cash flow resolved these problems.

We found some evidence that the implementation of the new financial procedures caused the prospectively paid agencies to spend resources more conservatively under the demonstration than they probably would have done under a national system. About half the agencies reported that they spent resources extremely cautiously during the demonstration because they lacked information about their financial situation. The lack of financial information was the result of two problems. First, substantial time (more than two and one-half years) elapsed before the agencies received their final payment rate. Second, the agencies were never given a statistical report that would enable them to track payments and utilization. (These reports were provided under the cost-reimbursement system, and initially, PGBA had planned to provide them as well.) This problem mostly affected agencies that did not have the management information software that would enable them to produce their own statistical reports. Because the agencies spent resources conservatively, the increase in the per-visit costs reported by Cheh and Trenholm (1999) and by Cheh and Black (2001) may be somewhat low relative to a system with better information (as we would expect the ongoing PPS to be).

Finally, the agencies had difficulty implementing the QA system; some of the problems were never resolved during the demonstration. However, both the prospectively paid and cost-reimbursed agencies experienced these problems, so it is unlikely that the difficulties affected any comparisons

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between the two groups. Nevertheless, because these problems suggest that some of the QA data may not be consistently accurate across the time periods (depending on what point in the episode the information was collected), the data should be used cautiously.[1]

Our analysis of the home health environment showed that dramatic changes occurred during the demonstration. Regulatory changes at the national level combined with the growth of managed care and local competition for referral sources led to sharp declines in agency volume. Because these changes affected prospectively paid and cost-reimbursed agencies equally, we have no reason to believe that they biased our estimates of the demonstration impacts. However, given that the incentives stemming from the environmental changes are quite similar to those provided by PPS, the differences between the prospectively paid and cost-reimbursed agencies are probably smaller than they would have been in absence of these environmental changes.

B. HOW DID PROSPECTIVELY PAID AGENCIES REDUCE THEIR VISITS PER EPISODE, AND WHY DID THEIR COST PER VISIT RISE?

Previous impact analyses found that the prospectively paid agencies reduced their visits per episode substantially more than did cost-reimbursed agencies (by 17 percent) (Trenholm 2000a; and Archibald and Cheh 2000). Furthermore, despite their incentive to decrease their cost per visit, cost per visit rose more for the prospectively paid agencies (by 11 percent) (Cheh and Black 2001). What explains these results?

To reduce their visits per episode, the agencies had to be willing to adopt effective strategies; they also had to be able to effectively implement those strategies. Particularly successful strategies

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[1]In our evaluation work using the QA data, problems with the data prevented us from using the data points that were triggered by a hospitalization. Furthermore, key outcomes were also confirmed using different data sources—bill records for utilization measures and a patient survey to assess improvements in functional status.

included increasing supervision of visiting staff, encouraging staff to promote patient independence, improving patient education, and changing the timing of visits. These strategies seemed to be most successful when they were used together or in combination with other approaches. To actually reduce service use, however, the agencies had to overcome numerous obstacles, including staff resistance, limits on available capital and managerial resources, and the demands inherent in providing the QA information. Furthermore, successfully lowering visits per episode entailed a financial risk: agencies that decreased their visits per episode the most experienced the largest increase in their cost per visit.

Although the agencies focused less on reducing costs than on reducing visits, we found that they did try to reduce their costs during the demonstration, but with little success. They tried to reduce their costs by reducing administrative staff, consolidating office space, investing in new technology, increasing productivity standards, and reducing benefits. Prospectively paid agencies were no less aggressive in their efforts than were the control agencies, but, despite their attempts, their cost per visit increased relatively more. Two factors thwarted their efforts to lower per-visit costs. First, their volume of services fell relatively more during the demonstration, increasing the overhead per-visit cost. Second, strategies that were effective at reducing visits (such as increasing supervision) sometimes increased the cost per visit, and some strategies that reduced the cost per visit (such as paying staff on a per-visit basis) made it difficult to reduce visits per episode. Thus, the prospectively paid agencies, which were trying to achieve both goals, were implementing strategies that were at cross-purposes. Because they reduced their visits per episode more than did the cost-reimbursed agencies, their cost per visit increased relatively more.

Perhaps the most important lesson we learned from our analysis is that few agencies realized their strategies were working at cross-purposes. Many of the demonstration agencies lacked the

financial savvy to understand that the more they reduced their visits per episode, the more their cost per visit would rise because of the increasing overhead cost per visit. Furthermore, many failed to understand that the techniques they used to reduce visits increased their per-visit costs.

C. HOW DID THE PROSPECTIVELY PAID AGENCIES CHANGE THEIR BUSINESS MODELS AND CARE PROCESSES IN RESPONSE TO THE NEW PAYMENT SYSTEM?

Understanding how agencies changed in response to the new payment system will help us understand how home health agencies may evolve under the national prospective payment system. If the prospectively paid agencies and the cost-reimbursed agencies changed in different ways during the past three years, we may expect to see a continuation of these changes in the future.

We found that prospective payment had small effects on the way that agencies conducted their business. Agencies in both groups retained the missions they had had at the beginning of the demonstration, but the prospectively paid agencies adopted slightly different approaches to achieve their mission. For example, they were more likely to explicitly consider financial viability as part of their mission—probably as a reaction to the large increase in cost per visit that prevented them from earning profits. They did not reduce their commitment to providing charity care, but they began to pursue this mission within the context of maintaining financial viability.

Prospectively paid agencies were also more likely to focus their strategic plans on physicians as referral sources. Many agencies view physicians as the key influence on a patient's choice of agency, and the prospectively paid agencies were much more likely to design strategies that would convince physicians to recommend their agencies. In contrast, control agencies seemed willing to choose longer-term strategies, such as establishing a reputation for providing high-quality care. The prospectively paid agencies had experienced relatively sharper declines in visit volume during

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the demonstration, and this drop might have prompted them to pursue more direct steps to attract new patients.

Both the prospectively paid and cost-reimbursed agencies changed the way they managed their staffs, but the two groups did so in slightly different ways. Control group agencies were more likely to consolidate management responsibilities among a smaller number of staff, whereas prospectively paid agencies were more likely to increase supervision of visiting staff, and to change the focus of staff training sessions to teach better skills for operating under the new payment environment.

Finally, agencies in both groups changed the way they delivered care. All the agencies changed their intake procedures, assessment and care planning procedures, and involvement of informal caregivers in planning and providing care. They all collected more information at intake, planned to provide fewer services, and increased the involvement of the family. Furthermore, both groups of agencies started the discharge planning process earlier and tried to make more and earlier referrals to community services. However, the prospectively paid agencies attributed these change to the new payment system, whereas the control agencies attributed them to environmental factors. Thus, although the changes in the care process would have been made even in the absence of the demonstration, prospective payment contributed to the changes in care processes, and agencies operating under the national payment system are likely to continue using these procedures.

D. IMPLICATIONS FOR A NATIONAL PROSPECTIVE PAYMENT SYSTEM

The findings from this report confirm our previous findings on access and quality of care (Trenholm 2000a; Chen 2000; and Chen 2001). We found little evidence that agencies attempted to screen patients, and little evidence that they abandoned their charity missions—suggesting that they are sought to serve all patients even while operating under the new payment system. Furthermore, we found little evidence that agencies delivered poorer-quality care during the

demonstration. Quality continues to be a major part of an agency's mission, and the major changes the agencies made in the process of care—focusing early on discharge and increasing the involvement of family and community services—are as likely to enhance care as to make it worse. Furthermore, the methods the agencies used to reduce services, including increasing supervision of staff, promoting patient independence, improving patient education, and changing the timing of visits, are unlikely to affect patient outcomes adversely; in fact, they may actually enhance them. It is true that the national payment system uses a different payment methodology than the one used during the demonstration, and that methodology could lead to results that differ from the ones we observed. Even so, the lesson derived from this demonstration is that agencies presented with the appropriate financial incentives can change the way they deliver care in ways that will not harm their patients.

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APPENDIX A

SITE VISIT PROTOCOL

HOME HEALTH PER-EPISODE PROSPECTIVE
PAYMENT DEMONSTRATION

AGENCY SECOND ROUND SITE VISIT
INTERVIEW PROTOCOL

Agency and Interviewer Information:

Agency Name: _____ *Agency ID#: _____

Contact Person: _____

Address: _____

Phone: _____

Date of Visit: _____

Name of Interviewer: _____

Treatment Status: _____

Agency Respondents:

Position	Respondent's Name
Administrator (CEO)	
Chief Financial Officer (CFO)	
Clinical Supervisor	
Quality Assurance Supervisor[1]	
Headquarters Representative	
Clinical Staff: Registered Nurse[1]	
Clinical Staff: Registered Nurse[2] or Therapist	
Billing Clerk	

[1]The Clinical Supervisor can substitute for these positions if necessary.

Key Dates:
Date Advance Letter Sent: _____
Date Thank You Letter Sent: _____
Start Date: _____
First-Visit Date: _____

RECORD NOTES ON PEOPLE HERE, EG, HOW LONG AT AGENCY

RECORD OVERVIEW OF MAJOR IMPRESSIONS

A. MISSION, SERVICES, AND CORPORATE STRUCTURE

MISSION AND SERVICES (CEO, CFO [A1-A2], CS [A1-A4], CStaff [A1-A2], QA [A1-A2])

*A1. Please briefly describe the mission of your Medicare-certified agency.

*A2. Has your agency's mission changed, or has the emphasis of its mission shifted, since it entered the demonstration? If so, how and why did it (change / shift)?

A3. DESCRIBE PROGRAMS/SERVICES AT FIRST VISIT. Since (then / your agency entered the demonstration), have there been any substantial changes in its programs and services? If so, please describe them.

RECORD ALL CHANGES SINCE DEMO IN GRID A3-4.

A4. IF CHANGES: What accounts for these changes?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

RECORD IN GRID A3-4.

GRID A3-4

Service or Program	*A3. SINCE DEMO: NEW = 1 DROPPED = 2 EXPANDED = 3 REDUCED = 4	*A4. WHY? CHANGE DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2
Visits Covered by Medicare Home Health		
a. Skilled Nursing		
b. Home Health Aides		
c. Physical Therapy		
d. Occupational Therapy		
e. Speech Therapy		
f. Medical Social Work		
Other Services		
g. Personal Care/Homemaker		
h. Private Duty Nursing or Therapy		
I. Pharmacy		
j. AIDS-related care services		
k. Hospice care		
l. Other:		
m. Other:		
n. Other:		

COMMENTS:

CORPORATE STRUCTURE (CEO, H [A5-A9], CS [A10])

*A5. DESCRIBE AFFILIATION AT FIRST VISIT. Has your agency *become* affiliated with any organizations or dropped affiliation with any organizations since (then / entering the demonstration)? If so, please explain the changes in the corporate structure of your Medicare-certified agency and affiliated organizations. (By affiliated agency we mean one with which your agency shares ownership, board members, or management.)

    PROBE: Which organization is the parent?

    NOTE: IF CHANGE, ASK FOR CURRENT ORGANIZATIONAL CHART.

*A6. IF CHANGED AFFILIATION: Has this change in affiliation affected your agency's operations, and if so, how?

    [   ] CHANGED AFFILIATION AFFECTED OPERATIONS? YES=1; NO=0

*A7. IF AFFILIATE AT FIRST VISIT OR NOW: Since your agency entered the demonstration, have the services or programs provided by (these affiliated organizations and any other) affiliated organizations changed? If so, how?

    RECORD ALL CHANGES SINCE DEMO IN GRID A7-8.

    SITE VISITOR: EXCLUDE ANY CHANGES IN AFFILIATE SERVICES BEFORE AFFILIATION

A8. IF AFFILIATE SERVICES CHANGED: What accounts for these changes?

    PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

    RECORD RESPONSE IN GRID A7-8.

Service or Program	*A7. SINCE DEMO: NEW = 1 DROPPED = 2 EXPANDED = 3 REDUCED = 4	*A8. WHY? CHANGE DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2
Visits Covered by Medicare Home Health		
a. Skilled nursing		
b. Home health aides		
c. Physical therapy		
d. Occupational therapy		
e. Speech therapy		
f. Medical social work		
Other Services		
g. Personal care or homemaker		
h. Private duty nursing or therapy		
I. Pharmacy		
j. Hospice care		
k. Hospital services		
l. Outpatient clinic services		
m. Nursing Home or Rehabilitation services		
n. Infusion therapy		
o. Clinical Laboratory Services		
p. Durable medical equipment		
q. Transportation Services Related to Medicare		
r. Other:		
s. Other:		
t. Other:		
u. Other:		

COMMENTS:

*A9. IF AFFILIATE AT FIRST VISIT OR NOW: Does an affiliated organization now undertake any management or patient-care activities on behalf of your Medicare-certified agency? Has an affiliate added or dropped activities like that since your agency entered the demonstration? And, if so, how and why did it do so?

PROBE: Would you say these changes were due to the demonstration or were accelerated by it?

PROBE: For example, a parent organization may provide financial management or specialists (such as ETs) for consultation.

*A10. IF AFFILIATE AT FIRST VISIT OR NOW: Does an affiliated organization ever provide care concurrently to patients of your home health agency? Has there been any change in this practice since your agency entered the demonstration? If so, why did this change occur?

PROBE: Would you say these changes were due to the demonstration or were accelerated by it?

PROBE: Either adding or dropping concurrent care.

*a. [   ] AFFILIATE CONCURRENT CARE SINCE DEMO STARTED? YES=1; NO=0

*b. [   ] CHANGE IN CONCURRENT CARE? YES=1; NO=0

STRATEGIC PLAN AND MARKETING STRATEGIES (CEO; CS [A15]; H [A16-A17])

*A11. Does your agency (or its parent organization) have a strategic plan? If so, has the strategic plan changed since your agency entered the demonstration? Could you briefly describe how and why has it changed?

PROBE: Either a formal or informal strategic plan.

*A12. Has the geographic service area served by your agency changed since it entered the demonstration? If so, how and why did it change?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*A13.   DESCRIBE BRANCHES / REMOTE OFFICES AT FIRST VISIT. Has your agency added or dropped any branch or remote offices (then/since entering the demonstration)? If so, why did your agency do so?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

PROBE: Were the changes forced on your agency by the federal government?

PROBE: A remote office simply provides space for visiting staff to use for paperwork or telephone calls.

*A14.   You are probably aware of the Health Care Financing Administration's program to reduce fraud and abuse in Medicare home health care, sometimes called Operation Restore Trust. Has your agency been reviewed for possible fraud and abuse? Have you been notified that it will be reviewed?

*A15.   Has your agency changed its operations as a result of concerns related to HCFA's investigations of fraud and abuse? If so, please describe these changes. Have they affected patient care?

*A16.   DESCRIBE INITIATIVES AT FIRST VISIT. Since (then / your agency entered the demonstration), has it undertaken specific initiatives to expand or maintain its market? If so, please describe them.

*A17.   IF INITIATIVES AT FIRST VISIT OR NOW: What are the three most important of all of your initiatives to expand or maintain your market undertaken *at any time* during the demonstration?

PAYMENT AND CAPITAL (CEO [A31-A37]; CFO; [A31-A37])

*A18.   Does your agency now serve any patients enrolled in *Medicare* managed care plans?

A19.   Has the percentage of revenue your agency receives from *Medicare* managed care plans changed since it entered the demonstration?

RECORD IN GRID A19-28.

A20.   IF CHANGE. What accounts for this change?

PROBE: Would you say the change was due to the demonstration or accelerated by it?

RECORD IN GRID A19-28.

A21. IF CHANGE. What percentage of your agency's *current* revenue is from *Medicare* managed care plans?

RECORD IN GRID A19-A28

*A22. Does your agency serve any patients for whom you are paid by *Medicaid or private* managed care plans?

[   ] OTHER MANAGED CARE? YES=1; NO=0

COMMENTS:

A23. Has the percentage of revenue your agencies receives from Medicaid or private managed care plans changed since it entered the demonstration?

RECORD IN GRID A19-A28

A24. IF CHANGE: What accounts for this change?

PROBE: Would you say the change was due to the demonstration or accelerated by it?

RECORD IN GRID A19-A28

A25. IF CHANGE. What percentage of your agency's current revenue is from *Medicaid or private* managed care plan?

RECORD IN GRID A19-A28

A26. Since your agency entered the demonstration, has there been any change in its *other* revenue sources? If so, what percentage of revenue comes from each source now?

PROBE: For example, from other Medicare, other Medicaid, or other private payers?

RECORD IN GRID A19-A28.

A27. IF CHANGE. What percentage of your agency's *current* revenue comes from these sources now?

RECORD IN GRID A19-2

A28. What accounts for these changes?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

RECORD IN GRID A19-A28

GRID A19-A28

PAYMENT SOURCE	*A19/23/26 CHANGED? 1 = YES 0 = NO	*A20/24/28 WHY? CHANGE DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2	*A21/25/27 IF CHANGE, CURRENT PERCENTAGE OF REVENUE FOR CERTIFIED AGENCY
a. Medicare Managed Care			
b. Medicaid and Private Managed Care			
c. Other Medicare (includes PPS)			
d. Other Medicaid (includes ???? programs)			
e. Private Insurance			
f. Private Insurance			
g. Charity:			
h. Other::			
I. Other:			

COMMENTS:

*A29. IF MANAGED CARE. Do any managed care plans pay your agency on a per-visit basis? A per-episode basis? A per-capita basis?

PROBE: Either Medicare, Medicaid, or private managed care plans.

*A30. IF NO MANAGED CARE. Since your agency entered the demonstration, has it submitted proposals to provide home health care to people enrolled in managed care plans? Why or why not?

*A31. During our first visit, some agencies were experiencing a cash flow problem but were not sure what was causing it. Since your agency entered the demonstration, has it experienced a problem with cash flow? If so, to what do you attribute the problem?

[   ] DUE TO DELAYS IN MEDICAL REVIEW
[   ] COULD NOT GET BIP (BI-WEEKLY INTERIM PAYMENT)
[   ] COULD NOT GET ACCELERATED PAYMENT
[   ] DELAYS IN SUBMITTING/ADJUSTING BILLS
[   ] OTHER (SPECIFY)

*A32. IF CASH FLOW PROBLEM. Has your agency's cash flow problem been resolved? How was this accomplished, and was the problem resolved by the end of the first demonstration year?

*c. ENTER 1 IF APPLICABLE
[   ] DECREASE IN LEVEL OF REVIEW
[   ] BIPS ADDED
[   ] ACCELERATED PAYMENTS RECEIVED
[   ] MAJOR BILLING PROBLEMS RESOLVED
[   ] OTHER (SPECIFY)

*A33. TREATMENT AGENCIES. There have been substantial delays in providing agencies with their final prospective payment rates. Did this delay effect your agency's operations? If so, how were operations affected?

PROBE: As of the end of 1997, agencies had still not received their final rates for the first demonstration year

*A34. What are your agency's primary sources of capital, and have they been adequate to cover growth or initiatives during the demonstration?

[   ] Endowment
[   ] Affiliated organization
[   ] Liquid assets (including retained earnings)
[   ] Fund raising efforts
[   ] Established line of credit
[   ] New borrowing
[   ] Demonstration profits (treatment agencies only)
[   ] Other

*A35. TREATMENT AGENCIES. For the first year of the demonstration, do you think your agency will have a profit or loss when you get final rates? What about the second year of the demonstration?

PROBE: For example, did increases in per-visit costs dampen the effects of reductions in visits per episode?

A36. TREATMENT AGENCIES. What are the major factors that affect whether your agency will have a (profit/loss) in each year?

A37. TREATMENT AGENCIES. IF PROFITS: How has your agency spent, or how do you plan to, spend the profits?

[   ] PAY OUT TO OWNERS
[   ] STAFF SALARY INCREASES/BONUSES
[   ] PURCHASE COMPUTERS/OTHER EQUIPMENT
[   ] PURCHASE ANOTHER AGENCY
[   ] PURCHASE REAL ESTATE
[   ] OTHER: SPECIFY

B.   LOCAL HOME HEALTH MARKET AND PATIENT MIX (CEO, CFO [B5-B8]; CS [B1-B2]; B4; B6] H[B6-B8])

*B1. Have managed care plans for *Medicare* patients become more common in this community since your agency entered the demonstration? Please describe their growth.

*B2. Does the presence of managed care plans affect the *care* your agency provides? If so, how?

*B3. Since your agency entered the demonstration, has the supply of nurses, therapists, social workers, or home health aides changed in your community? If so, for which type of staff has the supply changed and how has it changed?

*B4. During the demonstration, has your agency had difficulty hiring any type of staff? If so, which types?

[   ] NURSES
[   ] PHYSICAL THERAPISTS
[   ] OCCUPATIONAL THERAPISTS
[   ] SPEECH THERAPISTS
[   ] MEDICAL SOCIAL WORKERS
[   ] HOME HEALTH AIDES
[   ] OTHER: SPECIFY

*B5. Since your agency entered the demonstration, has there been any change in the salaries your agency must pay to attract qualified field staff? If so, for which type of field staff have salaries changed and how have they changed?

*B6. Have the characteristics of your agency's patients been changing since you entered the demonstration? If so, how were they changing? To what do you attribute these changes in your agency's patient mix?

PROBE: Relative to the base year

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*B7. TREATMENT AGENCIES IF CHANGES IN PATIENT MIX. Do you think that the 18-category case-mix adjustor will account for these changes in your patient mix? If not, what might not be accounted for?

*B8. TREATMENT AGENCIES. Are there any (other) issues you want to mention about the case-mix adjustor or (other) things you would like to see done differently about case-mix adjustment?

PROBE: For example, was the timing of the adjustment a problem for your agency?

C. **BILLING AND RATES** (CEO [C13-C15]; CFO; BC [C1-C13] H [C13, C15])

TIMELY = BY 60 DAYS FROM END OF PERIOD COVERED IN BILL

*C1. Early in the demonstration, some agencies did not submit bills, or did not correct and re-submit bill records, in a timely way for some of their Medicare-covered visits. Does your agency have any Medicare-covered visits for the *first* demonstration year for which bill records have not yet been submitted?

[   ]   UNBILLED VISITS FOR 1ST YEAR? YES=1; NO=0

*C2. IF BILLS NOT YET SUBMITTED. About what percentage of your Medicare *episodes* starting the first year have unbilled visits? About what percentage of your Medicare-covered *visits* for that year have not had bill records submitted?

*a. [   ][   ][   ] PERCENTAGE OF EPISODES WITH UNBILLED VISITS

*b. [   ][   ][   ] PERCENTAGE OF VISITS UNBILLED

*C3. What about for the *second* demonstration year? Does your agency have Medicare-covered visits for the *second* demonstration year for which bill records have not yet been submitted?

[   ] UNBILLED VISITS FOR 2ND YEAR? YES=1; NO=0

COMMENTS:

*C4. IF BILLS NOT YET SUBMITTED. About what percentage of your Medicare *episodes* starting the second year have unbilled visits? About what percentage of your Medicare-covered *visits* for that year have not had bill records submitted?

[   ][   ][   ] PERCENTAGE OF EPISODES WITH UNBILLED VISITS

[   ][   ][   ] PERCENTAGE OF VISITS UNBILLED

*C5. During the *second* demonstration year, did your agency submit bills and re-submit revised bills in a timely way? If not, could you please describe the types of situations in which billing was not timely?

PROBE: For example, when pressed for time, some treatment agencies did not submit interim bills for visits later in episodes as they were paid based on the first bill.

PROBE: Other agencies had problems getting doctors to sign necessary forms in a timely way.

*C6. IF NOT TIMELY BILLING. Have these problems with timely billing or revision of bills been resolved?

*C7. TREATMENT AGENCIES. PGBA's procedures require that bills be submitted in order. Has your agency had a problem with bills being rejected because they were not submitted in order? Has this problem been resolved?

C8. TREATMENT AGENCIES IF RESOLVED PROBLEM WITH REJECTION OF OUT-OF-ORDER BILLS. What steps did you take to resolve it?

*C9. TREATMENT AGENCIES. Demonstration procedures require that agencies "split-bill" for services rendered more than 120 days after admission. On our first visit, we asked about start-up problems with split billing. Now, we would like to know whether your agency had any *continuing* problems with split billing. If so, could you please describe these problems. Have they been resolved?

C10. TREATMENT AGENCIES IF RESOLVED PROBLEM WITH SPLIT-BILLING. What steps did you take to resolve the continuing problems with split billing?

*C11. Have you had any *other* types of continuing problems with billing? If so, could you please describe these problems and the situations in which they occurred.

PROBE: Problems with billing other than timeliness, order, and split billing, that we already discussed.

*C12.   Have they been resolved, and if so, how were they resolved?

*C13.   TREATMENT AGENCIES. As you probably know, Congress has mandated a national program of per-episode prospective payment. Do you have any suggestions for changes to billing procedures as we move from a demonstration to a national program of per-episode payment?

*C14.   TREATMENT AGENCIES. Under demonstration procedures, an agency will receive another per-episode payment for a patient who is readmitted only under certain conditions. Did your agency identify and monitor episodes against payments? If so, how did you do that? Was doing so a problem? If so, has the problem been resolved, and how did you resolve it?

*C15.   TREATMENT AGENCIES. Do you have any suggestions for other agencies about procedures for tracking episodes as we move from a demonstration to a national program of per-episode payment?

MEDICAL REVIEW (CEO; CFO [C18]; CS [C16-C17; C19-C21] H [C21])

*C16.   TREATMENT AGENCIES. During the demonstration, were any particular types of your patients rejected during medical review for the 120-day episode. If so, what types?

        PROBE: This is sometimes called abbreviated medical review.

C17.   TREATMENT AGENCIES, IF PATIENT TYPES REJECTED: What was the rationale for their rejection? Do you agree with this rationale? Why or why not?

*C18.   TREATMENT AGENCIES. Part-way through the demonstration, the percentage of episodes selected for medical review was reduced from 100 to 25 percent in a effort to speed medical review and payment for the first 120 days of an episode? Did your agency experience delays in medical reviews *after* the percentage of episodes selected for review was reduced? If so, how long was the typical delay? Did this delay cause problems for your agency (other than cash flow problems you already mentioned)? If so, what types of problems?

*C19.   TREATMENT AGENCIES. Did your agency have any other types of problems with medical review during the demonstration? If so, please describe these problems?

*C20.   TREATMENT AGENCIES. Have these problems been resolved and, if so, how was that accomplished?

*C21.   TREATMENT AGENCIES. Do you have any suggestions for changes to medical review procedures as we move from a demonstration to a national program?

REDUCE VISITS PER EPISODE (CEO; CS [C24-C31])

C22.   TREATMENT AGENCIES. I want to list the initiatives your agency has implemented to reduce visits during the first 120 days of the episode.

C23.   TREATMENT AGENCIES. DESCRIBE INITIATIVES TO REDUCE VISITS FROM FIRST VISIT. CONFIRM/ASK WHETHER EACH IMPLEMENTED AND WHETHER DUE TO DEMONSTRATION.

RECORD IN GRID C23-C29.

*C24.   TREATMENT AGENCIES. Since (then / your agency entered the demonstration), has it implemented *(any other)* specific initiatives to reduce visits during the first 120 days of the episode? If so, please describe them?

RECORD IN GRID C23-29

GRID C23-C29

INITIATIVES	*C23/24/25b/29 IMPLEMENTED = 1 PLANNED ONLY = 2	*C26 WHY? DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2	*C27/28 SUCCESSFUL IN REDUCING VISITS? YES = 1 NO = 0
a. Closer supervision of utilization			
b. Care maps/critical pathways			
c. Family support and community service			
d. Telephone contact			
e. Speeding up learning			
f. Eliminating multiple visits			
g. Use of specialists			
h. Rehabilitation			
I. Modify the environment			
j. Use of equipment			
k. Other:			
l. Other:			
m. Other:			
n. Other:			
o. Other:			
p. Other:			
q. Other:			
r. Other:			
s. Other:			

COMMENTS:

*C25.   CONTROL AGENCIES.   Since your agency entered the demonstration, has it implemented any specific initiatives to reduce visits per episode? If so, please describe them?

RECORD INITIATIVES IN GRID C23-29

C26. IF INITIATIVES: Why did you adopt each initiative?

PROBE: IF TREATMENT Would you say the changes were because of the demonstration or were accelerated by it?

RECORD IN GRID C23-29.

C27. TREATMENT AGENCIES, IF INITIATIVES. Have any of these initiatives been successful in reducing visits during the first 120 days of the episode? If so, which ones?

RECORD IN GRID C23-29.

C28. CONTROL AGENCIES, IF INITIATIVES. Have any of these initiatives been successful in reducing visits per episode? If so, which ones?

RECORD IN GRID C23-29.

C29. Did your agency *plan* any initiatives to reduce visits which you were *not* able to implement? If so, please describe them.

RECORD IN GRID C23-29.

*C30.   TREATMENT AGENCIES. Did any factors inhibit your agency's efforts to reduce visits during the first 120 days of the episode? If so, please describe them.

*C31.   CONTROL AGENCIES. Did any factors inhibit your agency's efforts to reduce visits per episode? If so, please describe them.

REDUCE COST PER VISIT (CEO, CFO)

C32.   Now, I want to get a list of the initiatives your agency has implemented to reduce *cost per visit.*

C33.   DESCRIBE INITIATIVE TO REDUCE COST PER VISIT FROM FIRST VISIT. CONFIRM/ASK WHETHER EACH IMPLEMENTED AND WHETHER DUE TO DEMONSTRATION

RECORD IN GRID C33-C36

*C34.   Since (then / your agency entered the demonstration), has it implemented *(any other)* strategies to control *per-visit* costs? If so, what types of initiatives have you pursued?

PROBE: To reduce cost per visit from what it otherwise would have been.

GRID C33-36

Previous and New Initiatives for Controlling Per-Visit Costs	*C33/34 ENTER 1 IF IMPLEMENTED?	*C35 WHY? CHANGE DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2	*C36 SUCCESSFUL IN CONTROLLING PER-VISIT COSTS? YES = 1 NO = 0
a. Reduce administrative costs			
b. Increase productivity of visiting staff			
c. Automation to support visiting staff			
d. Clerical support for visiting staff			
e. Change basis of payment			
f. Cut travel costs			
g. Cut supply costs			
h. Other:			
I. Other:			
j. Other:			
k. Other:			
l. Other:			
m. Other:			
n. Other:			
o. Other:			
p. Other:			
q. Other:			
r. Other:			
s. Other:			

C35. IF STRATEGIES. Why did you implement each strategy?

   PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

   RECORD IN GRID C33-C36

C36. IF STRATEGIES. Were any of these strategies successful in controlling per visit costs? If so, which ones?

   RECORD IN GRID C33-36

*C37.   Did any factors tend to inhibit efforts to control your agency's per-visit costs? If so, what were these factors?

*C38.   STRATEGIES TO REDUCE VISITS OR PER-VISIT COSTS. How did your agency motivate staff to reduce visits per episode or cut per-visit costs?

STAFF HIRING, TRAINING, AND SUPERVISION (CEO [D1, D3-D7]; CFO [D3-D4, D6]; CS [D1-D2, D5, D7]; CSTAFF [D7])

*D1.   Since your agency entered the demonstration, has it instituted any changes in hiring practices? If so, please describe these changes. Why were they made?

PROBE: Have you hired specialists with expertise not previously represented on your staff?

PROBE: Would you say these changes were due to the demonstration or were accelerated by it?

*D2.   Since your agency entered the demonstration, has it added personnel with specialized, advanced credentials? What types of specialized, advanced credentials do they hold? Why were they added?

PROBE: Such as an enterostomal therapist or a psychiatric nurse?

PROBE: Would you say these changes were due to the demonstration or were accelerated by it?

*D3.   Is the overall size of your agency's staff larger, smaller, or about the same size as when it entered the demonstration? If larger or smaller, what accounts for this change in size?

PROBE: Would you say these changes were due to the demonstration or were accelerated by it?

*D4.   STAFF SIZE REDUCED: How did your agency reduce staff size?

[   ]   Lay offs
[   ]   Attrition
[   ]   Cut back hours of staff (including more use of per-visit, per-day, or contract staff)
[   ]   Combine jobs/redistribute responsibilities
[   ]   Move staff to different program or affiliated agency
[   ]   Other

*D5.   Since your agency entered the demonstration, has it instituted any changes in *training* practices? If so, please describe them. Why were they made?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

D6. Have you changed the basis on which any of your staff are paid or shifted the mix of staff among payment types since your agency entered the demonstration? If so, please describe these changes and why they were made.

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

RECORD IN GRID D6
COMMENTS:

GRID D6

Discipline		*D6a. PAYMENT BASIS OR MIX CHANGE SINCE DEMO? YES = 1 NO = 0	*D6b. WHY? CHANGE DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2
I.	Nurse		
ii.	Physical Therapist		
iii.	Occupational Therapist		
iv.	Speech Therapist		
v.	Medical Social Worker		
vi.	Home Health Aide		
vii.	Other (specify)		
viii.	Other (specify)		

COMMENTS:

*D7. Has your agency changed supervision practices since it entered the demonstration? If so, why and how did they change?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

E. ADMINISTRATION (CEO [E1, E4-E7]; CFO [E2-E3; E8-E11])

*E1. Since your agency entered the demonstration, has it changed its administrative structure or procedures? If so, what changes were made, why, and when?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

RECORD b AND c IN GRID E1

GRID E1

TYPE OF CHANGE IN ADMINISTRATIVE STRUCTURE/ PROCEDURES	*E1b ENTER 1 IF APPLICABLE	*E1c WHY? DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2
I. Cut administrative staff relative to visits or episodes		
ii. Reorganized administration functions or responsibilities		
iii. Increased monitoring of financial and service-delivery performance		
iv. Changed home office cost allocation		
v. Substituted clerical for clinical staff		
vi. Contracted out administration functions		
vii. Other		
viii. Other		
ix. Other		

COMMENTS:

*E2. Since your agency entered the demonstration, has its travel costs changed? If so, what changes occurred and why did they occur?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

GRID E2

TYPE OF CHANGE IN TRAVEL COSTS	*E3b ENTER 1 IF APPLICABLE	*E3c WHY? DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2
I. Restructure staffing of geographic areas		
ii. Improve scheduling		
iii. Increased scrutiny of travel costs		
vi. Other:		
vii. Other:		

*E3. Since your agency entered the demonstration, has its supply costs changed? If so, what changes occurred and why did they occur?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*E4. Since your agency entered the demonstration, has it changed the way it uses computers to increase efficiency? If so, what changes were made and why?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

[   ] Add portable computers for clinicians
[   ] Add office-based computers for visiting staff
[   ] Add computers for administrative staff
[   ] Major change or addition to software
[   ] Other

*E5. IF PORTABLE COMPUTERS FOR CLINICIANS
Has the use of portable computers by your clinicians increased your agency's efficiency? Why or why not?

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*E6. Since your agency entered the demonstration, has it changed its use of other types of office technology? If so, what changes were made, and why?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

PROBE: Have you added or dropped any types of office equipment?

GRID E6

TECHNOLOGY	*E6b SINCE DEMO? NEW = 1 DROPPED = 2 EXPANDED = 3 REDUCED = 4	*E6c WHY? DUE TO DEMONSTRATION? NO = 0 ACCELERATED = 1 DUE TO DEMO = 2
I. Cellular or car phones		
ii. Fax machines in staff homes		
iii. Pagers/beepers		
iv. Voice mail		
v. Electronic mail		
vi. Automated attendance tracking		
vii. Other:		
viii. Other:		
ix. Other:		

*E7. Since your agency entered the demonstration, has its use of clerical supports changed? What changes were made and why?

GRID E7

		*E7b	*E7c
	TYPE OF CLERICAL SUPPORT	SINCE DEMO: NEW=1 DROPPED=2 EXPANDED=3 REDUCED=4	WHY? CHANGE DUE TO DEMONSTRATION? NO = 0 ACCELERATED =1 DUE TO DEMO = 2
I.	Data entry		
ii.	Filing		
iii.	Intake		
iv.	Prepare records		
v.	Track doctor's orders		
vi.	Scheduling		
vii.	Check consistency of internal records		
viii.	Use of clerical staff to complete 485		
ix.	Other:		
x.	Other:		
xi.	Other:		

E8. TREATMENT AGENCIES. Does it cost more for your agency to submit and adjust bills under the demonstration than it would have cost if you had not participated?

*E9. TREATMENT AGENCIES. Can you make a rough estimate of the magnitude of these demonstration billing costs *per month*? If so, what is your estimate?

*E10. Can you make a rough estimate of the magnitude of the *monthly* administrative cost of processing demonstration quality assurance data? If so, what is your estimate?

*E11. TREATMENT AGENCIES. Can you make a rough estimate of the magnitude of the *monthly* costs of identifying episodes to monitor against payment? If so, what is your estimate?

F. REFERRAL, INTAKE, AND PROVISION OF CARE (CEO [F1-F2, F9-F12]; CS; CStaff [F3-F8, F13-F17])

*F1. Since your agency entered the demonstration, have there been any changes in your agency's referral sources? If so, please describe these changes. Why did they happen?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

PROBE: For example, did your agency lose a major referral source or gain a new type of referrals?

*F2. Since your agency entered the demonstration, have there been changes in your intake procedures? If so, please describe these changes. Why were they made?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

F3. Since your agency entered the demonstration, have there been changes in your assessment or care planning practices? If so, please describe these changes. Why were they made?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F4. Has participation of patients and informal caregivers in *planning* care changed since your agency entered the demonstration: If so, how did it change and why?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F5. Has the participation of patients and informal caregivers in *providing* care changed since your agency entered the demonstration? If so, how did it change and why?

*F6. Does your agency use critical pathways for any types of Medicare patients? Since it entered the demonstration, has your agency changed its use of critical pathways? If so, what accounts for that change?

PROBE: Critical pathways describe the care to be provided under different circumstances.

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

F7. Since your agency entered the demonstration, has it changed its practices of referral to other programs offering home- and community-based care? If so, how and why did these patterns change?

PROBE: Examples of such services include senior companions, chore services, meals on wheels, respite care.

PROBE: For example, did the timing of such referrals change?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

F8. Does your agency use the telephone to monitor patient care? If so, for what types of patients? Since your agency entered the demonstration, has it changed its use of the telephone for this purpose? If so, what accounts for this change?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F9. Does your agency ever "share" patients with another home health agency, that is, with both agencies providing Medicare visits at the same time?

PROBE: For example, one agency might provide nursing and aide services and the other therapy.

*F10. IF SHARE: Since your agency entered the demonstration, has the proportion of patients who are shared changed? If so, what accounts for this change?

PROBE: Would you say these changes were due to the demonstration or were accelerated by it?

*F11. Since your agency entered the demonstration, have its transfer practices changed? If so, what is the nature of the change? What accounts for this change?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F12. Since your agency entered the demonstration, has the proportion of patients you transfer to another home health agency changed? If so, what accounts for this change?

*F13. Since your agency entered the demonstration, have its discharge planning or discharge practices changed? If so, how and why were they changed?

PROBE: For example, does planning for referrals to other services begin earlier in the episode?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F14. Since your agency entered the demonstration, has the typical *number* of the six types of visits covered by Medicare changed for any type of patient? If yes, please describe these changes? What accounts for them?

PROBE: For any type of patient?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F15. Has the timing of any of the *six types of visits covered by Medicare* changed for any type of patient? If so, please describe these changes. What accounts for them?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F16. Since your agency entered the demonstration, has the typical *length* of any of the six types of visits covered by Medicare changed for any type of patient? If so, for what types of patients and visits did this occur? Why and how did they change?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F17. Since your agency entered the demonstration, have there been any changes in the provision of visits *other than* the six types of visits covered by Medicare--such as dietician or respiratory therapy visits? If so, please describe these changes. What accounts for them?

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*F18. Does your agency now have productivity standards for the number of visits to be performed by a full-time-equivalent registered nurse? By a full-time equivalent home health aide? If so, what are the standards currently?

PROBE: For a field nurse or aide on salary.

REGISTERED NURSE:
*a. [   ] WHETHER HAVE NORMS FOR NURSE? YES=1; NO=0
*b. [   ] NURSE VISITS PER DAY PER FTE: ENTER FREQUENCY

AIDE:
*c. [   ] WHETHER HAVE NORMS FOR AIDE? YES=1; NO=0
*d. [   ] AIDE VISITS PER DAY PER FTE: ENTER FREQUENCY

*F19. Has there been a change in productivity standards since your agency entered the demonstration? If so, what accounts for this change?

G.   QUALITY ASSURANCE (CEO [G9-G11]; CS [G7-G12, G14]; QA; CStaff [G14] H [G11])

*G1. Demonstration procedures require completion of a quality assurance form at admission and discharge or 120 days after admission, whichever comes sooner.

After your nurses and other staff were experienced in completing the quality assurance forms, how long did it typically take to complete an admission form? A discharge form?

*a. [   ] [   ] MINUTES TO COMPLETE AN ADMISSION FORM

*b. [   ] [   ] MINUTES TO COMPLETE A DISCHARGE FORM

*G2. Was it straightforward for your agency to track the length of time since admission so that you could complete the quality assurance forms at 120 days in a timely way? If not, why not?

*G3. Demonstration procedures also call for the quality assurance form to be completed within a 5-day window around the 120th day for patients who were still in care. Was it sometimes necessary to complete this form outside of this window? If so, in what circumstances did this occur?

*G4. IF COMPLETION OUTSIDE WINDOW. About what proportion of forms for the 120th day would you say have been completed outside the 5-day window?

*G5. TREATMENT AGENCIES. Some agencies are monitoring some types of patients by telephone rather than through in-person visits. We would like to know when such patients are discharged (that is, after the last visit or after the last phone call).

Does your agency sometimes use telephone calls in lieu of visits, and if so, when is the discharge quality assurance form completed in these cases.

*G6. TREATMENT AGENCIES USING TELEPHONE MONITORING. When is the discharge quality assurance form completed for patients getting telephone monitoring?

PROBE: In conjunction with the last visit or in conjunction with the last telephone call?

*G7. Did the completion of the quality assurance forms before and after an inpatient stay sometimes pose special issues for your staff? If so, please describe these issues and how you addressed them.

PROBE: For example, what procedures did you adopt to complete the form if you only learned that the patient had been hospitalized some time after that occurred?

PROBE: For example, how was the form completed if an aide was the only member of your staff providing care on the last day before the inpatient stay?

*G8. Are there other issues you want to mention about the completion of the quality assurance forms? If so, what are they?

*G9. Your agency received a quality assurance report comparing the outcomes for its patients to outcomes for the patients of other demonstration agencies. Did you find this report useful? If so, in what ways was it useful?

*G10. Did your agency change its practices as a result of the demonstration quality assurance process or report? If so, what changes did you make?

*G11. As you may know, a quality assurance system similar to that used in the demonstration is to be implemented nationally. Do you have any suggestions for changes in the quality assurance system prior to its implementation in a national program?

*G12. Have your agency's *internal* quality assurance practices changed since it entered the demonstration? If so, how and why have they changed?

PROBE: Other than to add the demonstration quality assurance procedures.

PROBE: Would you say the changes were due to the demonstration or were accelerated by it?

*G13. DESCRIBE WHETHER ACCREDITED AT FIRST VISIT. Is this agency (still/now) accredited? If so, by what organization?

*b. ACCREDITING ORGANIZATION(S): ENTER 1 IF APPLICABLE.
[   ] JCAHO (Joint Commission for the Accreditation of Health Organizations)
[   ] CHAP or NLN (Community Health Accreditation Program or National League of Nursing)
[   ] NHCC (National Home Caring Council)
[   ] Other:

*G14. Home health agencies have to consider both controlling costs and providing quality care. Has the relationship between cost control and quality in your agency changed since it entered the demonstration? If so, how and why has it changed?

H.   EXIT QUESTIONS (ALL)

H1. That is all of the questions I have. Is there anything you would like to add about your agency's operations or its experience in the demonstration?

H2. TREATMENT AGENCIES. Are there any (other) suggestions you would like to make about operations or procedures under a national program of per-episode prospective payment?

H3. Do you have any questions?

APPENDIX B

**SUMMARY OF CASE-MIX ADJUSTMENT
FOR PAYMENTS DURING THE
DEMONSTRATION**

During the demonstration, agency payment rates are adjusted for severity using the Home Health Utilization Groups (HHUGs) Classification system. This system, which was specifically developed for the demonstration, classifies patients into 1 of 18 mutually exclusive cells on the basis of the following information:

- Whether the patient has an intervening hospital stay in an acute-care hospital during the 120 days following a home health admission

- Whether the patient was impaired in at least four of five activities of daily living (bathing, eating/tube feeding, dressing, toileting/elimination, and transferring) at home health admission

- Whether wound care was planned for the patient at home health admission

- Whether the patient was discharged from a hospital within the 14 days preceding home health admission

- Whether the patient had stage 3 or stage 4 decubitus ulcer at home health admission

- Whether the patient had cancer at home health admission that affected current treatment or personal-care needs

- Whether the patient has had a cerebrovascular accident that affected current treatment or personal-care needs

- Whether the patient had diabetes that affected current treatment or personal-care needs

As with payment rates, demonstration case-mix adjustment is based on the agency's base-period experience. Information on the characteristics listed above was collected on each patient admitted to each agency in the 90 days ("base quarter") before it began to operate under the demonstration. The same information was collected throughout the demonstration in the "remarks" section of the Uniform Bill, HCFA form 92 (UB-92).

Using the base quarter information, Abt calculated a base quarter index for each agency as follows. First, Abt calculated a category weight for each of the 18 case-mix groups by dividing the

average cost in each group by the agency's overall average cost.[1] Abt then multiplied each category weight by the percentage of episodes that fell into each case-mix category during the base quarter, and summed across all 18 categories. The result is a base quarter index for each agency, which is always equal to 1.

To obtain the annual case-mix-adjusted rates, Abt calculated a similar index for the demonstration years by multiplying the category weight from the base year times the percentage of episodes that fell into each case-mix category during the relevant year, and then summing across all 18 categories.

The demonstration year index for each agency is then divided by the agency's base quarter index and multiplied by the agency's base year episode rate. This results in the case-mix-adjusted episode rate.

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[1] If an agency did not have any observations in a particular category during the base quarter, the average cost for that casemix group calculated across all demonstration agencies was used instead of an agency-specific cost.